JOIN THE CALIFORNIA STATE RAILROAD MUSEUM IN COMMEMORATING THE 150TH ANNIVERSARY OF THE TRANSCONTINENTAL RAILROAD WITH NEW EXHIBITS, SPECIAL EVENTS, TRAIN RIDES AND MORE.

EVENTS

COMMUNITY DAY
Wednesday, May 8, 2019

SESQUICENTENNIAL GALA PRESENTED BY UNION PACIFIC
Saturday, May 11, 2019

NEW EXHIBITS

THE JUDAH MAP
Explore Theodore Judah's original 66' map routing the course of the Central Pacific Railroad on display in its entirety for the first time ever.

GOLD SPIKE EXHIBIT REDESIGN
Home to one of only four original Gold Spikes, this updated exhibit brings deeper connectivity to the story of the Transcontinental Railroad and this unique artifact.

THE CHINESE RAILROAD WORKER EXPERIENCE
Fully immerse yourself in the experiences of the Chinese Railroad Workers.

For more information about the 150th Anniversary, visit Railroad150.org

CALIFORNIA STATE RAILROAD MUSEUM

CaliforniaRailroad.Museum **#railroad150**

125 "I" Street, Sacramento, CA | 916-323-9280

Smithsonian Affiliate

BONUS!
EXPANDED ISSUE

Photo gallery: 1,770 miles of UP and SP action p. 50

Classic Trains®

THE GOLDEN YEARS OF RAILROADING

SPRING 2019

SPECIAL 150TH ANNIVERSARY SECTION

OVERLAND ROUTE

America's first transcontinental railroad in the classic era

CITY OF SAN FRANCISCO: *star-crossed streamliner* p. 16

Big Boys that might have been p. 28

Double diesels, turbines, and hydraulics p. 62

Donner Pass snowsheds p. 42

Un-driving the Golden Spike p. 36

Big Boy 4003 at Laramie, Wyo., in 1958.

BONUS ONLINE CONTENT CODE PG. 3

plus

Penn Central on parade around Horseshoe Curve p. 74

Front row seat on the Reading p. 80

John Gruber rides the Soo Line across Upper Michigan p. 86

The First Transcontinental Railroad's

150th ANNIVERSARY!

1869 2019

Join the Celebration!

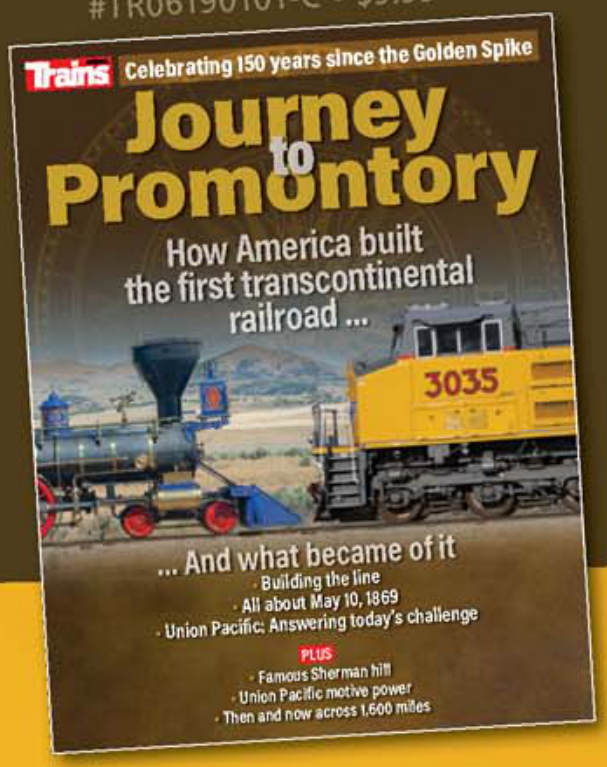
Golden Spike Replica Paperweight
#83036 • $64.99

Journey to Promontory 2019 Lapel Pin
#83040 • $5.00

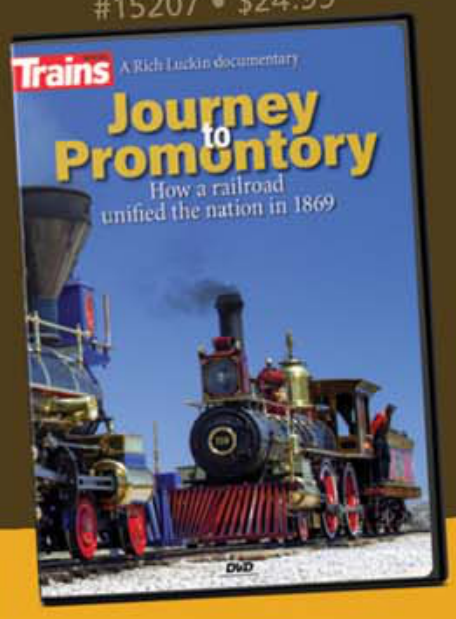
Golden Spike Lapel Pin
#83035 • $6.99

Celebrate the 150th anniversary of the first transcontinental railroad with these special products!

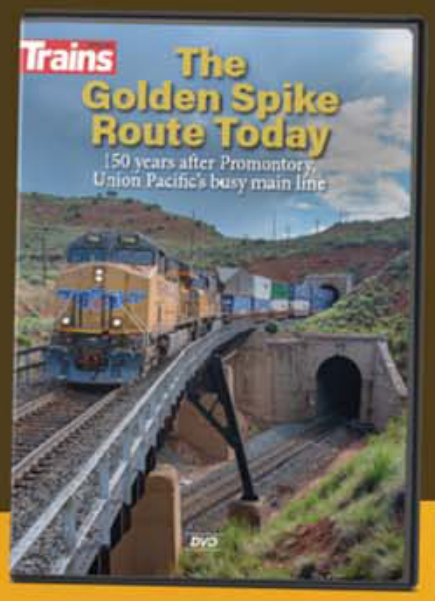
Journey to Promontory Special Issue
#TR06190101-C • $9.99



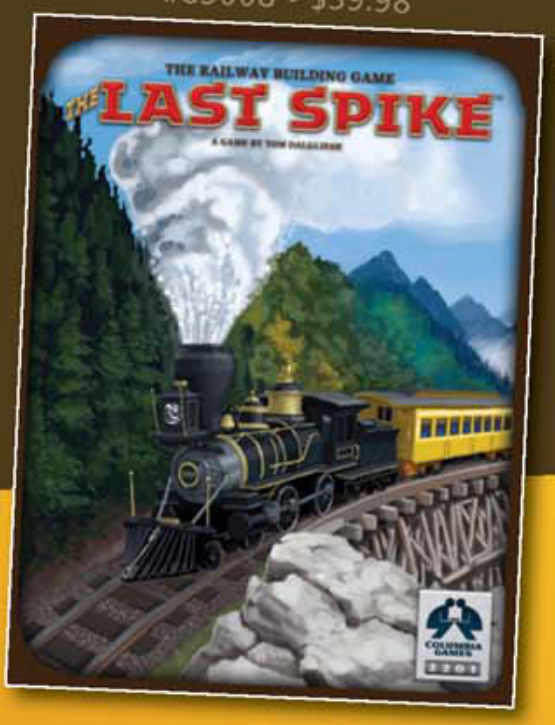
Journey to Promontory DVD
#15207 • $24.99



The Golden Spike Route Today DVD
#15208 • $24.99



The Last Spike Game
#83008 • $39.98



Order today at KalmbachHobbyStore.com/Transcontinental

Price does not include shipping. Sales tax where applicable.

P534743

Spring 2019 ▪ Volume 20 Number 1

ThisIssue

On our cover
Union Pacific Big Boy 4003 departs Laramie, Wyo., with an eastbound freight on September 19, 1958. Henry R. Griffiths Jr., Jim Griffiths collection

Features

Overland ROUTE 150

16 City of San Francisco: Modern Star of a Historic Route
JOE WELSH
The Overland Route's ultimate train plied its historic path for 35 years

28 Big Boys That Might Have Been
GIL BENNETT
Union Pacific considered ordering a new class of oil-fired 4-8-8-4s for service on its line to southern California

36 Un-driving the Golden Spike
JEFF TERRY, THORNTON H. WAITE, JAMES J. REISDORFF
The original line via Promontory, long unwanted by SP, was sacrificed for World War II

42 Summer of Change on Donner Pass
SHIRLEY BURMAN
In 1984, Southern Pacific workers replaced one of the last wooden snowsheds with a concrete structure

50 Photo Special
14 photos from six decades on the Overland Route

60 What's in a Photo?
JERRY A. PINKEPANK
UP's Riverdale Yard, Ogden

62 Big Power in the West
A. J. WOLFF
UP and SP continued their long tradition of massive, distinctive locomotives

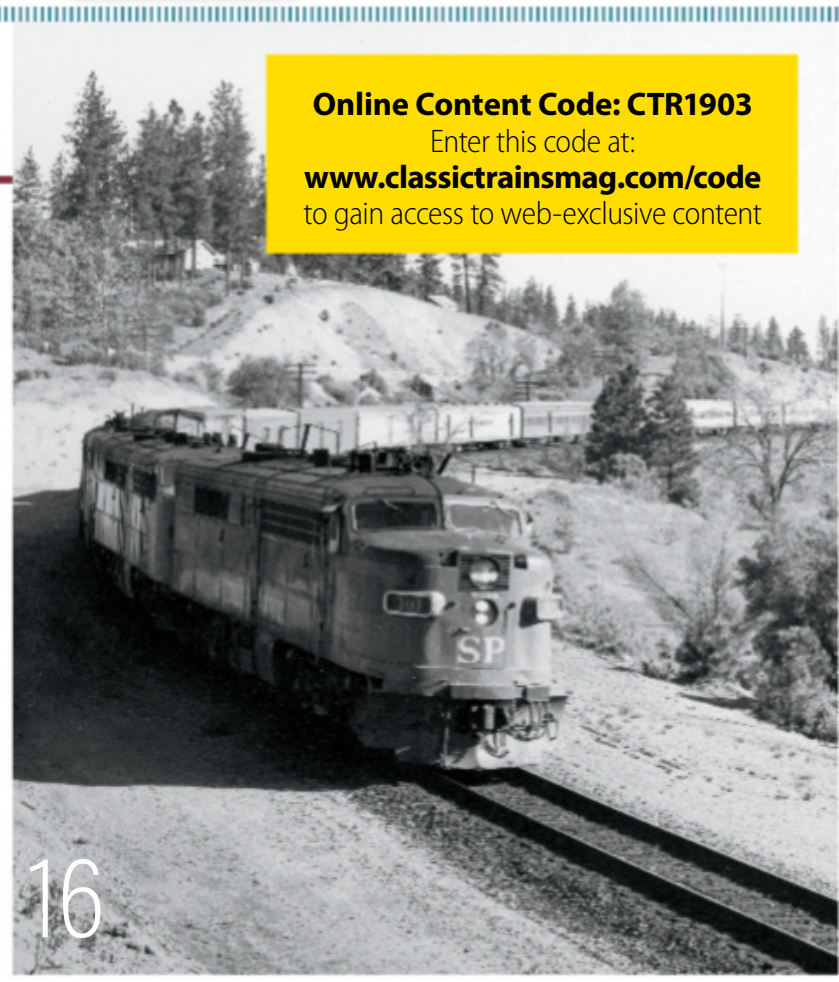
plus

74 Ingles Color Classics
J. DAVID INGLES
A sunny morning in 1969 yielded a successful first visit to PC's Horseshoe Curve

80 View from the Apartment
DALE W. WOODLAND
Catching the action on an important Reading line

86 Farewell to Soo Line 7 and 8
JOHN GRUBER
Loss of service in the Upper Peninsula brought "friends" out in droves

90 Best of Everything
CHRIS BURGER
NYC's management program led to a fulfilling career



Online Content Code: CTR1903
Enter this code at:
www.classictrainsmag.com/code
to gain access to web-exclusive content

Departments

4 Welcome The classic Overland Route

5 Head End A potpourri of railroad history, then and now

8 Fast Mail Letters from readers on our Winter 2018 issue

12 True Color Monon and Southern in Louisville

14 Mileposts Commentary by Kevin P. Keefe

95 The Way It Was Tales from railfans and railroaders

101 Car Stop Temporary crossover in Minneapolis

102 Classics Today Rail heritage along the Overland Route

105 Bumping Post Southern's New Orleans terminal

Classic Trains is published quarterly in January (Spring), April (Summer), July (Fall), and October (Winter), (ISSN 1527-0718, USPS No. 019-502) by Kalmbach Media Co., 21027 Crossroads Circle, P.O. Box 1612, Waukesha, WI 53187-1612. Periodicals postage paid at Waukesha, Wis., and at additional offices. Postmaster: Send address changes to Classic Trains, P.O. Box 8520, Big Sandy, TX 75755. Canada Publication Mail Agreement No. 40010760.

The classic Overland Route

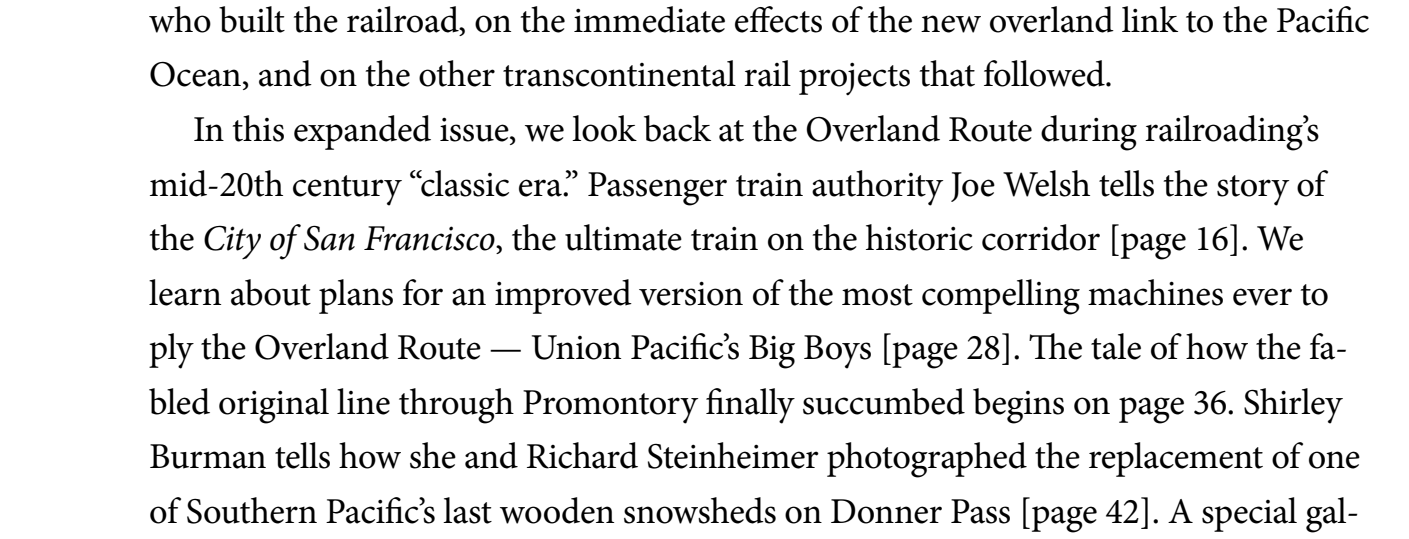
DONE. With that simple message, the telegrapher at Promontory, Utah, informed the world on May 10, 1869, that America's first transcontinental railroad had gone from dream to fact. As the nation observes the 150th anniversary of that great achievement this year, there's plenty of attention on the heroic efforts of the thousands of workers who built the railroad, on the immediate effects of the new overland link to the Pacific Ocean, and on the other transcontinental rail projects that followed.

In this expanded issue, we look back at the Overland Route during railroading's mid-20th century "classic era." Passenger train authority Joe Welsh tells the story of the *City of San Francisco*, the ultimate train on the historic corridor [page 16]. We learn about plans for an improved version of the most compelling machines ever to ply the Overland Route — Union Pacific's Big Boys [page 28]. The tale of how the fabled original line through Promontory finally succumbed begins on page 36. Shirley Burman tells how she and Richard Steinheimer photographed the replacement of one of Southern Pacific's last wooden snowsheds on Donner Pass [page 42]. A special gallery presents images from Omaha to Oakland [page 50]. This issue's installment of "What's in a Photograph?" focuses on Ogden, Utah, where UP and SP met [page 62]. A rundown of the gas turbines, double diesels, and diesel hydraulics that entranced UP and SP for a time starts on page 62. In his "Mileposts" column [page 14], Kevin Keefe pays homage to the 4-6-6-4 Challenger type, pioneered by and so identified with the UP. And in "Classics Today" we review 10 must-see museums along the route.

We hope you enjoy our tribute to America's most historic piece of railroad.

Robert S. McGonigal

EDITOR



On the route that was completed when two 4-4-0s met in 1869, Southern Pacific PAs head the *Overland Limited* at Berkeley, Calif., in 1955 (left) and Union Pacific E7s stand with the *City of San Francisco* at Cheyenne, Wyo., in 1947 (right). SP: John C. Hammond, Dan Pope coll.; UP: Richard H. Kindig

Classic Trains
THE GOLDEN YEARS OF RAILROADING

Editor	**Robert S. McGonigal**
Senior Art Director	**Lisa A. Bergman**
Associate Editor	**Brian Schmidt**
Contributing Editor	**J. David Ingles**
Editorial Assistant	**Diane Laska-Swanke**
Graphic Designer	**Lisa M. Schroeder**
Lead Illustrator	**Rick Johnson**
Contributing Illustrator	**Bill Metzger**
Librarian	**Thomas E. Hoffmann**
Columnist	**Kevin P. Keefe**
Editorial Director	**Diane M. Bacha**

Editorial
Phone: (262) 796-8776
E-mail: editor@classictrainsmag.com
Fax: (262) 798-6468
P.O. Box 1612
Waukesha, WI 53187-1612

Display Advertising sales
Advertising Sales Representative **Mike Yuhas**
Phone: (888) 558-1544, ext. 625
E-mail: adsales@classictrainsmag.com

Customer service
Phone: (877) 243-4904
Outside U.S. and Canada: (903) 636-1125
Customer Service: customerservice@ClassicTrains.info

Selling Classic Trains magazine or products in your store:
Phone: (800) 558-1544
Outside U.S. and Canada: (262) 796-8776 ext. 818
E-mail: tss@kalmbach.com
Website: www.Retailers.Kalmbach.com

Visit our website
ClassicTrainsMag.com

Kalmbach Media

Chief Executive Officer	**Dan Hickey**
Senior Vice President, Finance	**Christine Metcalf**
Senior Vice President, Consumer Marketing	**Nicole McGuire**
Vice President, Content	**Stephen C. George**
Vice President, Operations	**Brian J. Schmidt**
Vice President, Human Resources	**Sarah A. Horner**
Senior Director, Advertising Sales & Events	**David T. Sherman**
Advertising Sales Director	**Scott Redmond**
Circulation Director	**Liz Runyon**
Art & Production Manager	**Michael Soliday**
New Business Manager	**Cathy Daniels**
Retention Manager	**Kathy Steele**
Single Copy Specialist	**Kim Redmond**

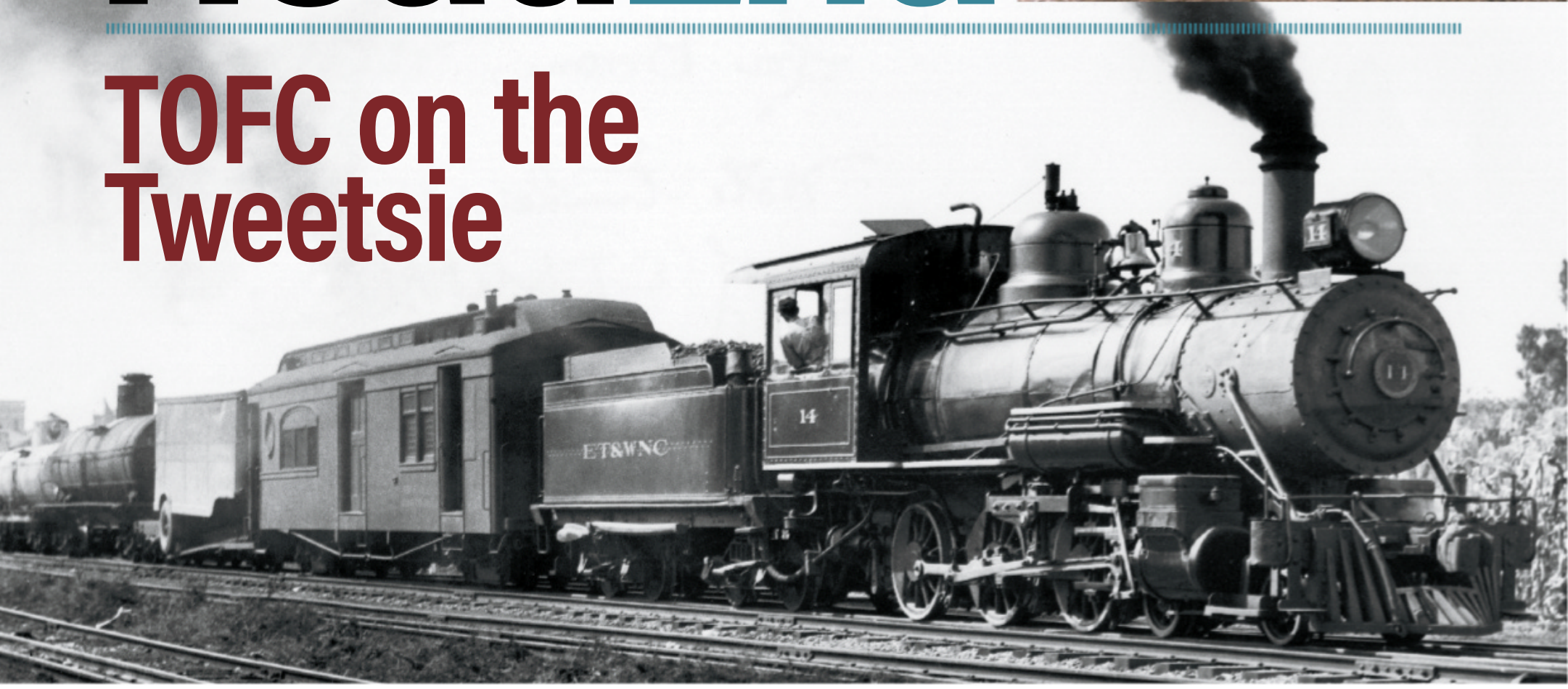
Single copy: $7.99 (U.S.). Subscription rates: U.S.: 1 year (4 issues) $24.95; 2 years (8 issues) $46.50; 3 years (12 issues) $67.00. Canadian: Add $6.00 postage per year. Canadian price includes GST, payable in U.S. funds. International: Add $14.00 postage per year, payable in U.S. funds, drawn on a U.S. bank. BN 12271 3209 RT. Printed in U.S.A.

A potpourri of railroad history, then and now

HeadEnd

WE MISS . . . Clear glass in cab windows. We like to see if the crew inside is waving back. Greg McDonnell

TOFC on the Tweetsie



The narrow-gauge, backwoods East Tennessee & Western North Carolina (the "Tweetsie") was an unlikely trailer-on-flatcar (TOFC) pioneer. In 1935, the road had three truck trailers that it carried on special flatcars with a depressed area for the trailer wheels; the service lasted four years. In 1936, 4-6-0 No. 14, combine 15, a piggyback load, and assorted other freight cars get ready to head into the mountains from Johnson City, Tenn. Classic Trains collection

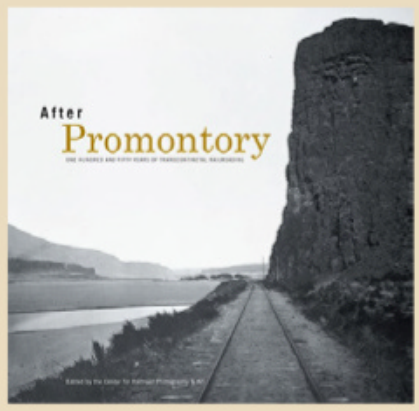
Road-switcher on ice

Canadian National locomotive 1732, idling at Stratford, Ontario, one night in January 1960, shows the effects of a day on a branch in the snowy country east of Lake Huron. Not that it matters to Mother Nature, but 1732 is a rare bird, one of 35 RSC13s built by Alco affiliate Montreal Locomotive Works in 1957 with 1,000 h.p. 539 engines and A1A trucks for working light branchline trackage. Jim Shaughnessy

Metra joins the heritage parade

Chicago's Metra has repainted two MP36 diesels in liveries keyed to the territories in which they operate. In late 2017, Rock Island District unit 425 got a red-and-yellow scheme that recalls one used by RI beginning in 1969; it's named for former Metra CEO (and RI alum) Don Orseno. In late 2018, the Milwaukee District's No. 405 appeared in orange and maroon. Also in '18, Union Pacific North Line commuter club car 553 regained its Chicago & North Western colors. From top: Robert S. McGonigal; Lou Gerard; Russell Sharp

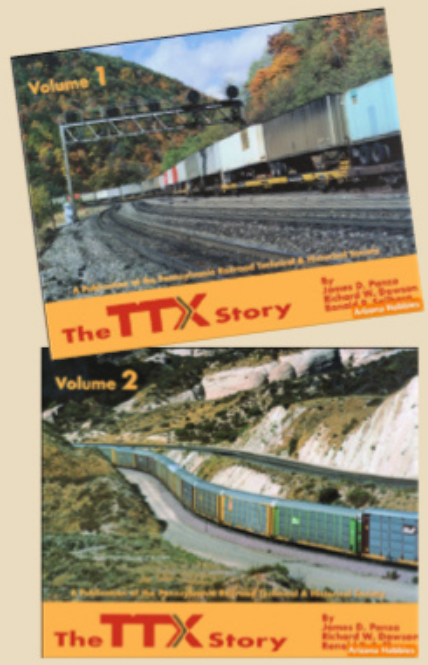
Reviews



After Promontory: 150 Years of Transcontinental Railroading

Edited by Center for Railroad Photography & Art. Indiana University Press, Bloomington, Ind. 268 pages. $50.

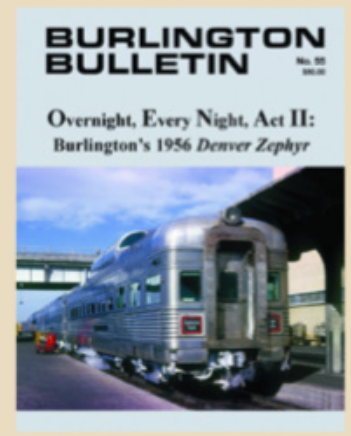
This volume brings broad coverage of all transcontinental rail links in the U.S. from SP's Sunset Route to the Hill Lines. The photos are supported by text from top railroad historians: H. Roger Grant, Don L. Hofsommer, and Maury Klein, among others. The photographers, 49 known, and a few unidentified, are included in an index along with biographical information. Photo coverage of the mid-century classic era is sparse, with most photos from the 19th and late 20th/early 21st centuries. Reproduction on all is top-quality. *After Promontory* aptly tells the tale of railroading, and incidentally railroad photography, in the 150 years since the driving of the Golden Spike. — *Brian Schmidt*



The TTX Story, Volumes 1 & 2

By James D. Panza, Richard W. Dawson Ronald P. Sellberg. Pennsylvania Railroad Technical & Historical Society, P.O. Box 54, Bryn Mawr, PA 19010; prrths.com. 624 pages. $99.95.

This massive set looks at what really matters in railroading: the cars behind the locomotives, the cargo they carry, the strategy behind them, and how together they constitute a paying business. The authors cover TTX from its PRR origins as Trailer Train in 1955 up to its current involvement in nearly every aspect of freight railroading. Volume 1 traces the development of intermodal equipment, from early piggyback to the rise of double-stack; Volume 2 reviews TTX's experience with auto racks, gondolas, boxcars, and other cars, all profusely illustrated with action and detail photos, most in color. Along the way, influential figures appear, among them Larry S. Provo, David C. Bevan, and Andrew Reardon. The authors have been admirably comprehensive and PRRT&HS has done a first-class job of production. — *Kevin P. Keefe*

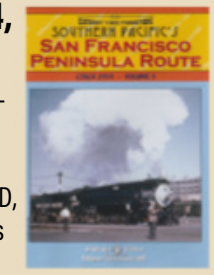


Burlington Bulletin No. 55: Overnight, Every Night, Act II: Burlington's 1956 Denver Zephyr

Burlington Route Historical Society, P.O. Box 456, La Grange, IL 60525; burlingtonroute.com. 196 pages. $50.

Burlington Bulletin No. 50 covered the 1936 *Denver Zephyr*; No. 55 picks up with the 1956 edition. It mixes color and black-and-white photos with period advertisements, timetables, and menus from the train. Reproduction is acceptable. Car rosters, train consists, and other supplemental information are included in simple tables. This book is likely to be the definitive volume on the last incarnation of a famous train. — *B.S.*

Southern Pacific's San Francisco Peninsula Route circa 1954, Volume 5



Catenary Video Productions. P.O. Box 144, El Grenada, CA 94018; catenaryvideo.com. DVD, 65 minutes. $29.95 plus $5 shipping.

SP's operations out of San Francisco in the mid-1950s constituted one of the last big steam shows in America. This excellent, mostly color program shows the thrilling commute parade, 0-6-0s switching at Third and Townsend, various roundhouses, specials on the Santa Cruz and Los Gatos branches, and more. Narration is well-written and informative; sound synchronization is excellent. The program closes with 7 minutes on the Market Street Railway's 40 Line to San Meteo, which ended in 1949. — *Robert S. McGonigal*

Lunch for 2,200

Guests at tables fill the spacious concourse of Buffalo Central Terminal on June 22, 1929. The occasion is a luncheon to mark the opening of NYC's magnificent new station. The last train departed 50 years later, but dogged local preservation efforts give hope that a similar scene might one day occur again. New York Central

VISIT US ON THE WEB

ClassicTrainsMag.com

Video: Horseshoe Curve in 1969

Watch Dick Wallin's movies of Penn Central action in the Alleghenies.

***City of San Francisco* consists**

Study train consists of the Overland Route's top train from the years 1936, 1939, 1947, and 1955.

Photo of the Day

See a new photo from our collection each day. Classic Trains subscribers can view the full archive.

Weekly blog

In "Mileposts," columnist Kevin Keefe reflects on the places he's been, the people he's met, and how railroading's history impacts the industry today.

Follow us on Facebook

Piedmont & Northern's portable substation sits outside the line's Greenville, S.C., shop in 1944.
Alex L. Darragh

Southern interurban lives on

The spread on pages 86–87 was by itself worth the price of the magazine! I worked for Republic Locomotive Works in the early 1980s and drove across that wooden bridge for West Washington Road, in the background of the shot. Republic was conducting their heavy locomotive rebuilding business in the former Piedmont & Northern locomotive shop in Greenville, S.C. Though the overhead wire from the P&N days was long gone, it amused me that insulators for the wire were still evident in the metalwork of the building in the 1980s.

There were two brothers, Lewis and Ray Rhodes, in supervisory positions at Republic during my time there who both had long previous employment records with the original P&N. Ray and I shared a small office just off the main shop floor and at times he would regale me with wonderful stories about incidents on the P&N in its electric days.

Thank you for the memories! — *Thomas Lawson Jr., Vestavia Hills, Ala.*

Quebec Central connection

I enjoyed the article on the Quebec Central [page 20]. The little spur over to Rock Island came off at Beebe Junction. My grandfather was the plant manager at the Union Twist Drill plant that straddled the border between Derby Line, Vt., and Rock Island.

Coincidentally, when I entered the Norfolk & Western management training program, the pricing person I was assigned to encountered a shipment dealing with Beebe Junction. I was able to describe the route he needed to determine correct rates and divisions.

Robert Holland, Rockland, Maine

Thank you for another superb issue of Classic Trains. The article on the Quebec Central Railway is a fitting memorial to Jim Shaughnessy, his writings, and his photography.

I also have a comment on the text: The approval for discontinuance of the Quebec City–Sherbrooke *Dayliner* could not have been given by the National Transportation Agency, which was not in existence at the time. It more likely would have been a decision of the Canadian Transport Commission, that was created that year, based on consideration by one of the its predecessor agencies, the Board of Transport Commissioners.

Classic Trains is a wonderful read. Best wishes to you, your colleagues, and contributors for 2019.

Derek Scrafton, Wattle Park, South Australia

Recalling Conrail

Thank you for publishing Larry DeYoung's wonderful piece on Conrail [page 34]. It was fascinating, informative, and well-written! I hope and expect that you will have many more pieces from him in upcoming issues.

Dennis Allen, Highland Park, Ill.

I enjoyed the Conrail article in the Winter 2018 issue. Has there ever been a definitive history on Conrail? It seems to be a hole in the railfan bibliography.

Dave Shore, Vancouver, B.C.

¶ *I recommend Rush Loving Jr.'s* The Men Who Loved Trains *(Indiana, 2006) as a readable and engaging history of railroading in the Northeast, a large portion of which was made up by Conrail. Also, watch for a new volume on Conrail and its predecessors by Brian Solomon, to be published by Kalmbach Books in 2020. — B.S.*

Hopefully the Conrail article and Kevin P. Keefe's defense of it [page 12] are not a harbinger of the future. It's too early to diverge from your pledge of the middle four decades. I stopped subscribing to Trains in 1996 because the content had become boringly modern. I'd hate to see history repeat itself with Classic Trains.

Gerhart Karg, Riverdale, N.J.

¶ *Several years after Classic Trains' launch in 2000, we broadened the magazine's coverage era to span roughly 1920 (end of USRA control) to 1980 (Staggers deregulation act). — R.S.M.*

Penn Central U25B 2652 displays mis-matched hood doors at Niagara Falls, N.Y., in early 1976.
Doug Kroll

Ingles' humor classics

I enjoyed the "Ingles Color Classics" article on the Rock Island's mis-spelled GE units [page 58]. I came across the same issue a few times on the Penn Central and Conrail [see photo above].

Doug Kroll, North Tonawanda, N.Y.

J. David Ingles' humorous examples of poor old Rock Island's spelling troubles brought chuckles from one of my non-railfan sons who was reading over my shoulder.

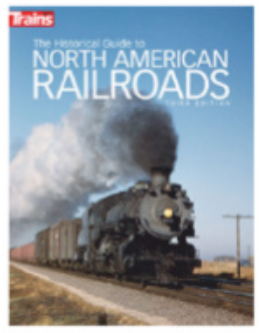
Daryl Mundis, Voorburg, The Netherlands

Fallen Flags now a fallen flag

I've enjoyed the "Fallen Flags Remembered" series for years [page 16]. Although I'm sad to read of its demise, I certainly understand that subject in that format is not infinitely sustainable. I would love to buy the series in new books. Of course, some additional maps and photos would really be the icing on the cake!

Tom Lauridson, St. Vrains, Colo.

¶ *While it doesn't fly the same "Fallen Flags" banner as our now-discontinued series, what you seek — capsule histories with representative photos and maps — already largely exists in Kalmbach's 2014* The Historical Guide to North American Railroads, Third Edition. *The 320-page volume covers more than 170 railroads, both fallen flags and current operations. You can order a copy at KalmbachHobbyStore.com. — B.S.*



J. David Ingles' reminiscence of the Wabash awakened my introductory experience to the road. In the early 1960s a friend invited me to join him on a rambling road trip to visit his brother at a Milwaukee-area university.

After looping through Kentucky where we saw the *General* of Civil War fame hauling a yellow coach for school excursions, we arrived in Tolono, Ill., at the junction of the Wabash and Illinois Central. Seeing and hearing IC's beautiful streamliners hammer the diamonds at high speeds was grandly impressive. After a few IC trains had passed, we saw an approaching westbound headlight on the Wabash. Curiously, it inexplicably seemed to be flashing on and off. We momentarily thought the train had derailed. Thus I was introduced to the use of oscillating warning lights, sometimes called a Mars light. Such lights were rare in our home area of the Northeast.

Once in Milwaukee, we made several round trips to Chicago with rides on a Chicago North Shore & Milwaukee *Electroliner*, a Milwaukee Road *Hiawatha*, and the Chicago & North Western.

Years later I would come across remnants of the Wabash's Canadian-built F unit fleet operating under Norfolk & Western in southern Ontario and in to Buffalo, N.Y.

Bob Mohowski, Greenfield Center, N.Y.

Fast Mail

World's Fair fail

H. W. Barber's photo on pages 14–15 is, in a word, spectacular. However, the E6 that became Seaboard Air Line No. 3014, as referenced in the caption, was completed in November 1939, according to EMC/EMD reference data. That is after the conclusion of the New York World's Fair's first season. It was the unit exhibited at the Fair's second season, which opened May 11, 1940, and it displayed "1940" in its numberboards. Instead, it was a Seaboard E4 that was displayed at the 1939 Fair. It should be noted that Preston Cook's "E Units A to 9" [Summer 2012, pages 27–28] appears to be the only correct source as to which units were displayed at the 1939 and 1940 fairs.

John W. Schultz, New Braunfels, Texas

In the late 1930s a member of my family founded the Viobin Corp. in Monticello, Ill. Its primary function was manufacturing wheat germ and corn germ through a patented defatting process that rendered the final product stable from spoilage. Founder Ezra Levin was pleased with the Wabash spur that served his company's needs well. I remember watching a small steam switch engine moving freight cars on that spur.

Mitchell Heller, Glenview, Ill.

Stoking a love of trains

As the grandson of a former engineer for the Boston & Maine, have been a lover of trains since I was a little boy. I have subscribed to Classic Trains off and on for a while now to remember the railroad sights I recall from my childhood. Some articles can be confusing due to their railroad lingo or place names, but Philip Moseley's article about his travails at Oak Hill, Kans., on page 81 was clear and relateable, especially his description of lighting the recalcitrant stove. I haven't laughed that hard for quite a while.

Tom Moran, Longmeadow, Mass.

Great Northern train No. 43 rests at Shelby, Mont., circa 1950. It connected with the Burlington's train of the same number at Billings. Note the through sleeper on the rear of the consist.
John C. Illman

Burlington on the frontier

Chicago, Burlington & Quincy train No. 30 at Billings, Mont., pictured on page 42, looked much the same on my visit in August 1967. By then the consist arriving as No. 43 continued on as No. 30 the next day, and visa-versa, so they didn't have to turn the trains. Nos. 42 and 43 carried an Omaha–Billings sleeper until 1960, and until 1962 a diner was picked up westbound at Alliance, Nebr., and handed off to the eastbound at their meeting point of Ulm, Wyo. Nos. 29 and 30 would make their last runs on September 1, 1967.

Nos. 42 and 43 (renumbered 41 and 42 in October 1968) lasted until August 24, 1969, in a bitter, hard-fought train-off battle that saw the westbound discontinued en route at Hemingford, Nebr., with passengers bused on to their destination.

Great Northern had a connecting train, also Nos. 42 and 43. It carried an Omaha–Glacier National Park sleeper in the summer of 1952 and as late as the spring of 1956 listed an Omaha–Great Falls sleeper. The GN train was replaced by an RDC later in 1956 and discontinued between Billings and Great Falls as of July 5, 1959.

Michael M. Bartels, Lincoln, Nebr.

Got a comment? Write us at Fast Mail, Classic Trains, P.O. Box 1612, Waukesha, WI 53187-1612; email: fastmail@classictrainsmag.com. Letters may be edited for length and clarity.


SOUTHERN
3097

Coming into Louisville

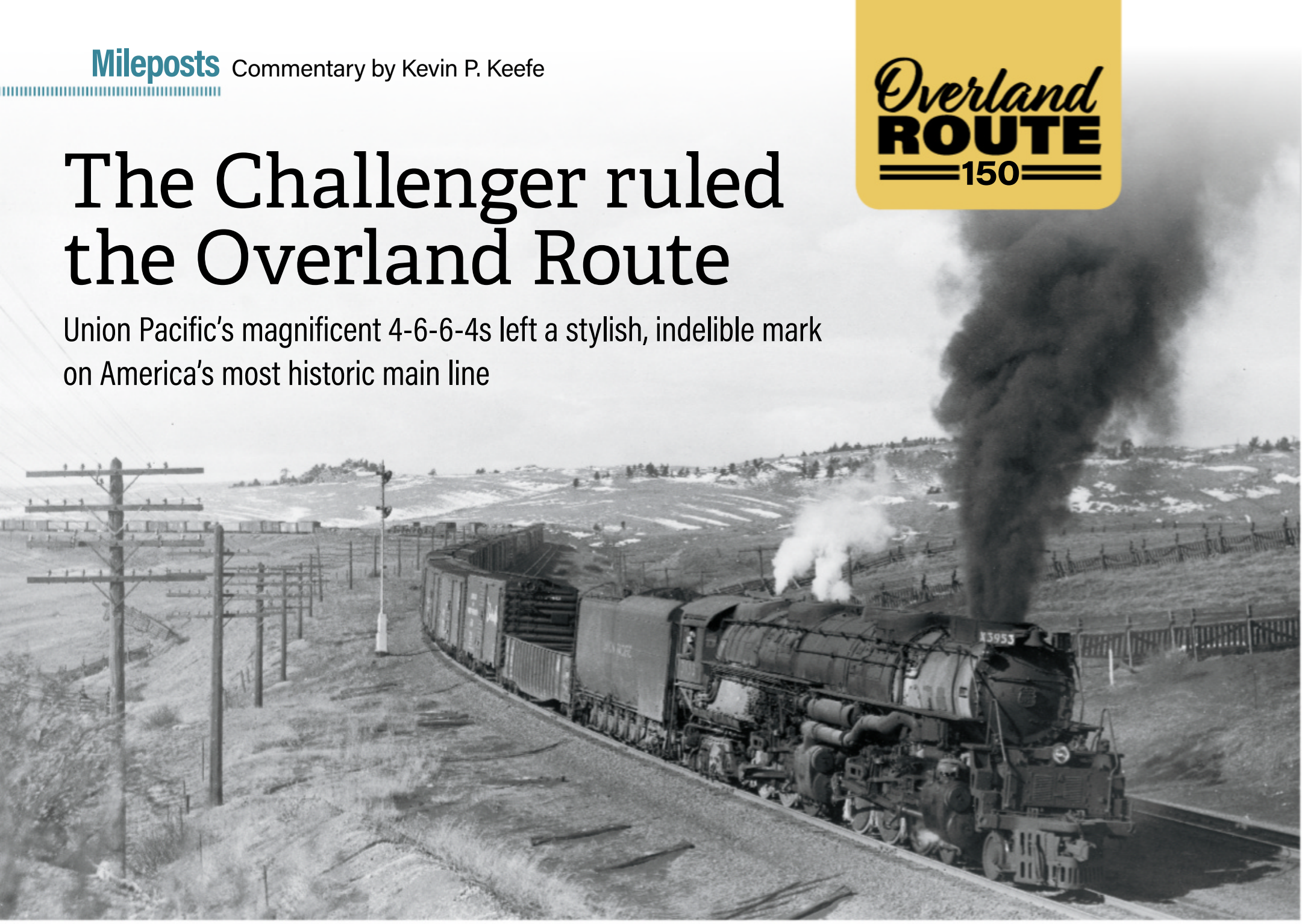
Semaphores hold Southern Railway train 153 at DI Tower in Louisville, Ky., so Monon 2nd 71 can proceed ahead of it into Kentucky & Indiana Terminal's Youngtown Yard on January 30, 1966. The cabooses of both freights are out on K&IT's bridge over the Ohio River. Three EMD SD35s and a GP7 are on the point of Southern 153, while four Alco RS2s are in charge of the Monon train.

Tom Smart, Frank and Todd Novak collection

Overland ROUTE 150

The Challenger ruled the Overland Route

Union Pacific's magnificent 4-6-6-4s left a stylish, indelible mark on America's most historic main line



UP Challenger 3953 rounds a curve near Sherman, Wyo., highest point on the Overland Route at 8,013 feet, with an eastbound freight in 1951.
R. H. Kindig

Railroad slogans are one of the industry's lost arts. The old ad men and promoters who came up with them were geniuses. Remember when phrases like Water Level Route or Main Line of Mid-America told you so much about a particular railroad? The best ones spoke of far-flung places, and how to get there: Main Street of the Northwest; Everywhere West; Through the Heart of the South. They don't write 'em like that anymore.

Of all these slogans, the one that strikes me as most mythic is "Overland Route." It conjures images of stagecoaches, John Gast's painting *American Progress*, track-laying gangs of the Central Pacific and Union Pacific, Cecil B. DeMille's epic film *Union Pacific*, and a dusty outpost where a golden spike was driven. Closer to our own time, it means yellow *City* streamliners flashing across the Nebraska prairie, midnight sleeping-car moves at Ogden, and 4-8-8-4s storming up Sherman Hill.

The latter image is of particular interest, now that UP No. 4014 is scheduled to come out of UP's Cheyenne shop and prove once again why someone at Alco coined the phrase "Big Boy." Like thousands of others this spring, I plan to be there to witness the spectacle.

I'm sure I'll thrill to the sound and feel of 4014. It's a 595-ton superlative. But when I think of the word "Overland," my imagination fixes on an entirely different class of steam locomotive, the one that preceded Big Boy. To me, the Overland Route was the kingdom of the Challenger.

> Of all these slogans, the one that strikes me as most mythic is "Overland Route."

Introduced in 1936, the burly but relatively compact 4-6-6-4 was designed to replace UP's 9000-class 4-12-2 monsters, putting an equally prodigious boiler atop a much more versatile jointed frame. The Challenger was arguably the most successful simple articulated of all time. UP had 105 of the total of 252 built, and converted a number of them to oil fuel, allowing them to roam the system far and wide.

Other railroads were impressed. The Challenger type eventually found work on eight other carriers, in places as disparate as Bozeman Hill on the Northern Pacific, Ararat summit on the Delaware & Hudson, and deep in the Appalachians on the Clinchfield. And they were more than simply freight haulers. "A 4-6-6-4 could and did work heavy passenger trains with no apology," wrote David P. Morgan, "and in the words of one expert it rode as well at 60 to 70 miles per hour as any articulated ever built."

Some of my admiration for UP's Challenger is based on the sheer number of 4-6-6-4s the railroad fielded. Some of it is based on the frequency with which Challengers show up in steam-era photographs of the UP. Over the years I've pulled too many to count from the Kalmbach files; they were favorite targets of Dick Kindig, Robert Hale, Wally Abbey, and other greats. And some of it is based on a very special day in September 1990, when I

rode the cab of UP No. 3985 for 120 miles from Cheyenne to Lodge Pole, Nebr., during the heyday of the Challenger's excursion career.

There's a lot to remember about that day: the immensity of that boiler backhead, the spaciousness of the cab, the sonic high of double exhaust, the precision and intensity with which UP steam boss Steve Lee and his crew ran the engine. But most of all I remember the smooth ride. I'd ridden in a number of mainline engines by that time and the watchword usually was "hang on!" Not quite so the cab of 3985. It was a surprisingly comfortable place to be.

That was precisely what UP and Alco had in mind when they made an important revision to the 1942 class of 20 Challengers. Without going into technical detail beyond my pay grade, the locomotive designers took a hard look at the way both front and back engines were attached to the boiler and made some changes to contact surfaces and hinge pins, all to make the best single-expansion articulated even better.

On that last claim, don't take my word for it. In his forthcoming book from Indiana University Press, *American Steam Locomotives: Design and Development, 1880–1960*, the late William L. Withuhn sees all the Challengers — Union Pacific's and everyone else's — as the ultimate expression of steam design. "Whatever the priority of invention, the simple-expansion articulated had been developed in just three decades from a ponderous and specialized beast into a fast, flexible, and potent machine. . . . [Their] contribution to railroad economics was disproportionate," Bill writes.

The 3985 shared in that contribution. The engine is dormant today, resting offstage while 4014 (as well as 4-8-4 No. 844) get all the limelight. But it remains on UP's active roster, sharing the same PTC exemption as the other two engines. I'll be celebrating the 4014 this spring, but I won't forget for a moment that the 3985 is parked over in the Cheyenne roundhouse, waiting for another chance to rule the Overland Route. ■

KEVIN P. KEEFE joined the TRAINS staff in 1987, became editor in 1992, and retired in 2016 as Kalmbach Publishing Co.'s vice president, editorial. His weekly blog "Mileposts" is at ClassicTrainsMag.com.

City of San Fra

Often overlooked, and sometimes the victim of tragedy, a notable member of UP's Streamliner fleet plied its historic path for three and a half decades

BY JOE WELSH

nciscо MODERN STAR OF A HISTORIC ROUTE

If asked to pick their favorite streamlined passenger train, Union Pacific fans might mention the *City of Los Angeles*, the flagship of the road's diesel-powered fleet of "*City*" trains. Or perhaps they would select UP's *City of Portland*, America's first overnight streamliner. Some might name the *City of Denver*, led by rakish automobile-like locomotives until the 1950s. Purists might pick the short-lived M-10000, the train that kicked off the streamliner era in 1934. Fewer likely would choose the *City of San Francisco*, arguably the most workmanlike and star-crossed of the *City* fleet. Still, for 35 years it reigned as the premier train on the nation's most historic rail route. And, partly because it was the only *City* train dependent on two other railroads to reach its terminals, it offered the most diversity.

Like the rest of the *City* fleet, the *City of San Francisco* was a Union Pacific creation, finished in UP's Armour yellow and bearing the title Streamliner (with a capital "S"). Also like most of the other *Cities*, between Chicago and Council Bluffs, Iowa, the train rode the Chicago & North Western — until fall 1955, when it switched to the Milwaukee Road. West of Ogden, Utah, Southern Pacific handled the train — but only as far as Oakland, where passengers boarded ferries or buses for San Francisco.

Launched in 1936 and surviving until Amtrak's May 1, 1971, start-up, during its last couple of decades the *City of San Francisco* seemed challenged to keep up with its rail-borne competition. During much of the post-World War II period, the train made do with the antiquated Streamliner title and single-level lounge and dining cars, while most other Chicago–West Coast trains were sprucing themselves up with dome cars. Did the *City*'s otherwise innovative operators miss the postwar memo that to thrive, western long-distance trains had to be reinvented? Scenery and service — not speed — were the new order.

Critics might think first of SP's limited acceptance of dome

Bearing the emblems of the three Overland Route partners on its nose, brand-new E6A No. SF-4 poses with E6Bs SF-5 and SF-6 and the 14-car *City of San Francisco* consist on the wye near Western Avenue, Chicago.
Union Pacific

Overland ROUTE 150

The original *City of San Francisco* passes famous Castle Rock at Green River, Wyo., during its weekly voyage west on November 6, 1937. Two-unit locomotive M-10004 represents the second generation of UP Streamliner power.

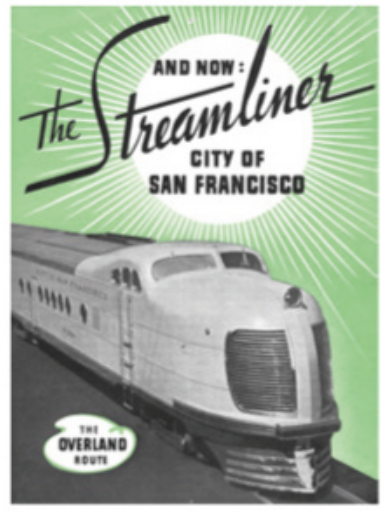
R. H. Kindig, A. J. Wolff collection

A crowd gives the bright new *City of San Francisco* a hearty send-off at SP's gloomy Oakland Pier terminal on the train's first eastbound run in June 1936. The rounded rear end housed not an observation lounge but a kitchen — note the white-clad worker seen in the window above the specially painted baggage cart.

Southern Pacific, Jim Beckwith collection

Electro-Motive E2 diesels SF-1, 2, and 3 lead the 1938 *City of San Francisco* (the "eighth train," in UP Streamliner chronology) east across the Great Salt Lake in August '44.

Union Switch & Signal; above right, Joe Welsh collection



cars, but that wasn't the only factor. Despite heavy competition in the 1950s, when a DC-6 could fly San Francisco–Chicago nonstop in about 6 hours, the *City*'s advertising slogan wasn't the catchiest: "The Fastest Thing on Wheels between San Francisco and Chicago." The schedule was a bit under 40 hours for the not-quite-1,700-mile trip.

What it lacked in innovation, however, the *City of San Francisco* made up for in variety . . . by default. The always-interesting consist featured a fascinating mix of prewar and postwar cars well into the late 1950s.

A LONG HISTORY

Then there was all that history. When the *City of San Francisco* was launched on June 14, 1936, it was one the most innovative transportation improvements the Bay Area had ever seen, but it was not the first great train to serve the area. This new streamliner wasn't creating a market, rather it was building on one that had been in place since shortly after the Union Pacific and Central Pacific railroads were joined at Promontory, Utah, on May 10, 1869.

The "Overland Route" eventually reached Chicago, which would become the natural eastern terminal for most "transcontinental" (to the Pacific Coast) passenger trains. This historic link between northern California and the nation's "railroad capital" existed for decades before Los Angeles became an important West Coast destination.

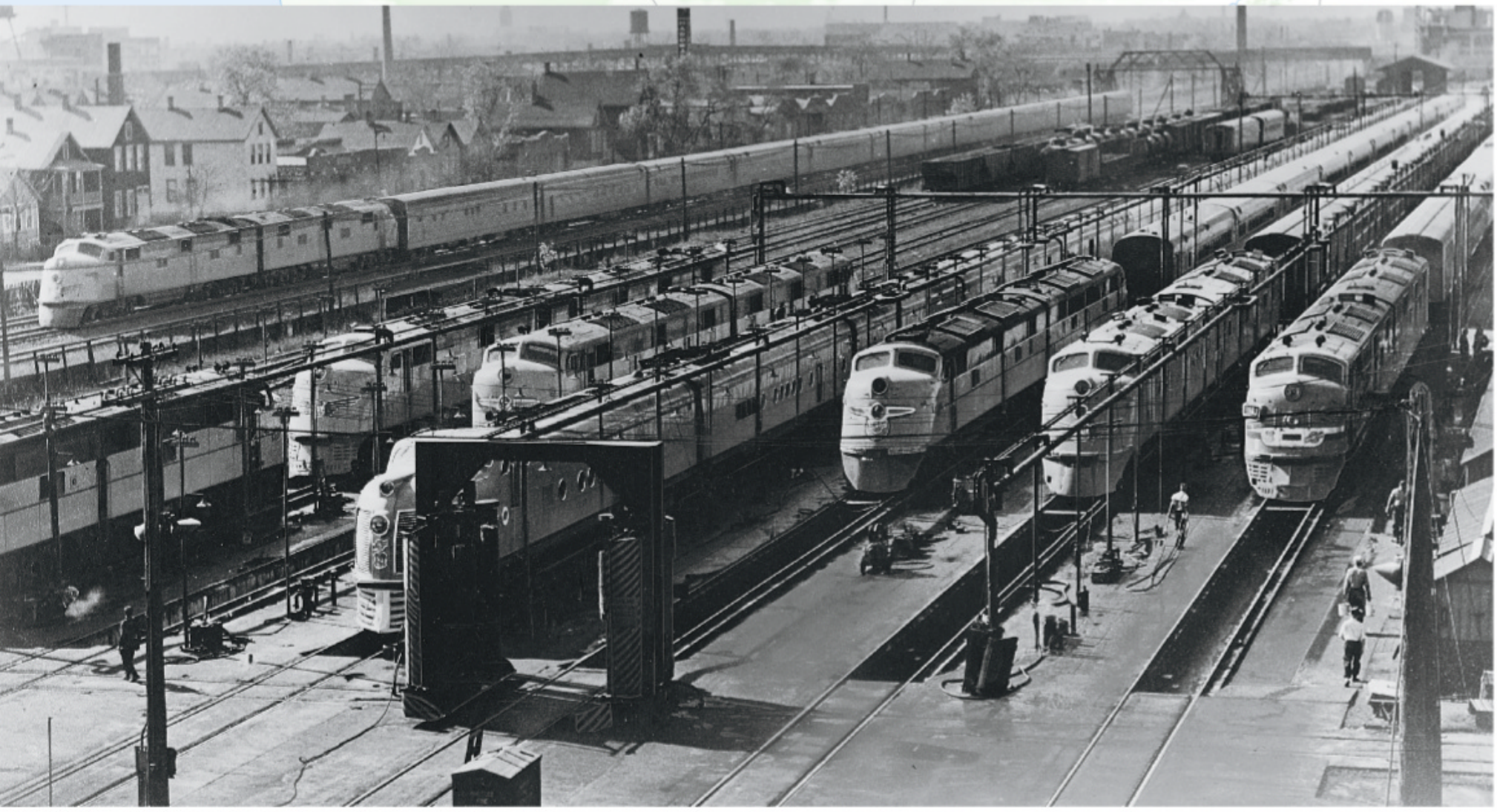
The five-day rail trip to San Francisco reduced the prior travel time by months, but in addition to speed, the railroad offered luxury. The short-lived *Golden Gate Special*, inaugurated in 1888, three years after the Southern Pacific leased the Central Pacific, offered unheard-of amenities. The train's quick demise just one year later cleared the way for the evolution of the *Overland Limited*, which would become the top train on the route in 1896 and hold the crown as the best train to the Bay Area from the Midwest for 40 years.

Real competition to the Bay Area would be sparse until after World War II. Notable exceptions were the *Scenic Limited* from St. Louis, introduced in 1915 via Pueblo, Colo., and Salt Lake City over Missouri Pacific, Rio Grande, and Western Pacific. Line improvements on the Rio Grande encouraged the development of a Chicago–Bay Area train via Denver and Salt Lake, which debuted in 1939 as the *Exposition Flyer* over the Burlington Route, Rio Grande, and WP. The spectacular scenery through the Rockies and the Sierra Nevada would eventually inspire the creation of the *California Zephyr* in 1949 — and give the Overland Route stiff competition.

FIRST EDITION

In common with its 1935–36 Streamliner running mates to Portland, Los Angeles, and Denver, the *City of San Francisco* began as a single consist built by Pullman-Standard, with propulsion equipment provided by Electro-Motive. UP owned the rolling stock and operated it on SP and C&NW on a mileage rental basis, with additional agreed charges to help offset the cost of its sole ownership. Numbered M-10004 and known as the "fourth train" for its sequence in UP Streamliner history, the two-unit locomotive and nine cars made five round trips per month, each one-way trip taking about 39¾ hours. The Overland Route railroads advertised these departures in nautical terms, often "launching" the service on "maiden voyages." Trips were sometimes called "sailings," as their frequency mimicked that of contemporary ocean liners.

With a fully articulated nine-car consist, featuring cars with a low center of gravity built primarily of aluminum with sides that tapered inward from the bottom, and all painted in UP's newly adopted Armour yellow with a brown roof and gold lettering, the *City of San Francisco* resembled the earlier *City* trains except for the motive power. Replacing the turret-style cab and fish-mouth grille introduced by the M-10000 was a configuration that



A late-1940s view of the diesel tracks at C&NW's 40th Street Yard in Chicago shows (from right), the *City of San Francisco*, *City of Los Angeles*, *Twin Cities 400*, and *City of Denver.* On the main line beyond, the eastbound *City of Portland* passes.

Chicago & North Western

Oakland Pier, 5 p.m., February 3, 1952: SP PAs prepare for the 5:27 departure of the *City of San Francisco*; three tracks over stands the *City*'s main competitor after 1949, the *California Zephyr*, which arrived 45 minutes earlier.

Fred Matthews; right, Joe Welsh coll.

resembled a contemporary automobile. Rated at 1,200 h.p., the two-unit (cab and booster) diesel locomotive was connected by a span bolster, giving it a wheel arrangement of B-B+B-B.

Behind the locomotive were nine cars: an auxiliary power-mail-baggage; a baggage-dormitory-kitchen; a diner-lounge; two 11-open-section sleepers; a 7-double-bedroom, 2-compartment sleeper; an 11-enclosed-section sleeper; a 48-seat chair car; and a 38-seat chair car with buffet.

On board, despite the cars' compact nature, diners could choose from entrées including sirloin steak, mountain trout, and roast lamb. For dessert, at least in summer, strawberry shortcake and peach Melba were offered. Service was on UP's new and distinctive "Winged Streamliner" china, which for a time was available for purchase on board!

The *City of San Francisco* was supplemented on July 8, 1937, by the exotic *Forty Niner*, a deluxe all-Pullman, extra-fare train that was steam-powered and operated every sixth day. It was composed of refurbished heavyweight cars except for its rear two, the articulated experimental Pullman lightweight duplex sleeper *Bear Flag* (formerly named *Advance*) and the sleeper-lounge-observation car *California Republic* (formerly *Progress*).

FOR 1938, A NEW *CITY* CONSIST

Spurred by traffic demand and competitive pressures, UP continued to modernize, upgrade, and expand its Streamliner fleet. Consequently, just a year and half after the service was inaugurated, an all-new *City of San Francisco* (the "eighth train") was introduced on January 2, 1938. Drawn by an A-B-B set of E2 diesels (Nos. SF-1, 2, and 3), the new train consisted of 14 cars. Six days earlier, a nearly identical trainset entered service on the *City of Los Angeles* route. These new cars had straight, not tapered sides, but most of the newer cars were still articulated with their neighbors.

UP would make its *City* fleet memorable by introducing a series of innovative lounge cars. One example was the 1936 *City of Denver*'s Frontier Shack, patterned after a rustic Western saloon. The new *City of San Francisco* and *City of Los Angeles* would continue the trend. The former featured Art Deco lounge car *Embarcadero*, which preceded the later and more adventurous interior designs that Henry Dreyfuss and Raymond Loewy created for New York Central and Pennsylvania trains. The *City of L.A.* offered the amazing *Little Nugget*, an opulent, Victorian-era saloon (complete with a *faux* canary in a gilded cage) that looked like it was straight from a Hollywood set.

Another feature of the 1938 *City of San Francisco* was the attractive lounge-observation car *Nob Hill*. It offered a wonderful rearward view, something missing on the 1936 train, which housed a buffet kitchen at the end of its rear car.

After the 1938 train was ordered, UP and C&NW suggested to SP that it consider operating both the 1936 *and* the new trainsets to enable twice-weekly frequency. SP demurred, citing concerns about passengers' impressions and worrying that the original trainset would be considered "obsolete" compared to the new version. Instead, the 1936 *City of San Francisco* train would be heavily refurbished, expanded, and used to replace the original *City of Los Angeles* in August 1938, enabling *City of L.A.* frequency to be doubled.

In the development, staffing, and promotion of the new Overland Route trains, UP and its partners also built on the service's tradition. Many of the luxury features offered in older heavyweight trains that were still running, such as the *Overland Limited*, were retained for first-class travelers on the new *City* fleet. Barber and valet service were among the amenities, and for coach passengers, UP borrowed from innovations in successful newer running mates to the *City* trains. These newer *Challengers*, which focused on the coach and tourist trade, had proven popular because they offered expanded on-board services to coach passengers. One of their most popular features, stewardess nurses, were also available on the *City* trains.

Another interesting Overland Route train was the *Treasure Island Special*, introduced on May 22, 1939, for the summer season to meet the demand of visitors to the Golden Gate International Exposition in San Francisco Bay. It ran for two summers.

SABOTAGE!

In addition to on-board services and speed, the *City of San Francisco* unfortunately would become known for tragedy. Its first and most deadly brush with fate occurred on August 12, 1939, when westbound train 101 derailed at speed on the SP near Harney, Nev. The first 10 cars left the track at a bridge over the Humboldt River, killing 9 passengers and 15 employees and injuring 121. Five cars were destroyed: coffee shop-kitchen car *Presidio*, diner *Mission Dolores*, dormitory-club-lounge *Embarcadero*, and Pullmans *Twin Peaks* and *Chinatown*. Some passengers alleged the train had been speeding to make up time. A board of inquiry, which included state and federal law-enforce-

The *City of San Francisco* skims along San Pablo Bay just west of Pinole, Calif., about 19 miles from arrival at Oakland Pier, in the 1940s. In the foreground is the Santa Fe's line to Richmond, later to host the *San Francisco Chief*.

D. G. Edwards

Near Sherman, Wyo., on November 2, 1950, Union Pacific E7 No. 931A and two other E units take the *City of San Francisco* over the famous hill west of Cheyenne unassisted. Passing on the eastbound track is 4-8-4 No. 821, running light after helping train 103, the *City of L.A.,* up the grade.

R. H. Kindig

ment and railroad employees, concluded that the rails had been forced out of alignment and blamed the wreck on sabotage, but no one was ever charged with the crime.

A replacement train was hastily assembled, entering service at Chicago on August 23. The replacement cars were a coach and a twin-unit diner from the *Challenger* and streamlined sleepers previously assigned to the NYC, PRR, and the Pullman pool. On the rear was the experimental observation car *George M. Pullman*.

The *City of San Francisco* remained popular and profitable, so on July 26, 1941, another trainset joined the pool, doubling frequency to twice weekly. In addition, the reconstituted eighth train was refreshed with new cars. At this time the *Forty Niner*, not as strong an earner as the *City*, was discontinued.

TWO CONSISTS, THEN WAR

The 1941 *City* was referred to as UP's "10th train," or SF 4-5-6, the numbers assigned to its three-unit locomotive. A similar new *City of L.A.* had begun running a few weeks earlier. Powering each was an A-B-B set of EMD E6s. The *City of San Francisco* had 14 cars, with mid-train club car *Marina* boasting an Art Deco bar, a barber shop, a nurse's room, and a shower. The new equipment featured rivetless car sides, and fewer cars were articulated, with only the diner/coffee shop and two sleepers being paired. The livery evolved to an Armour yellow body, gray roof, and red lettering and striping — colors still used by UP today. As cheery as the new trains were, their advertising hinted at something darker, as after December 7, 1941, brochures were hastily rubber-stamped with notes that stewardess nurses on all UP trains were discontinued owing to a shortage of women, who were needed for Red Cross and other defense purposes.

With the advent of war, rail ridership grew dramatically, rising 400 percent nationwide from 1941 to '45. Railroad passenger-miles in the last three years of World War II were double the World War I figure and almost six times higher than the Depression year of 1932. As the fastest and most reliable link between its end points, the *City of San Francisco* was routinely ridden by high-ranking military officers, and it was difficult to secure space for a traveler without priority. The *City*'s annual earnings increased from $320,000 in 1940 to $822,000 in 1942, and by war's end the train was earning more than $1.3 million annually.

Those earnings might have been higher if the railroads could have expanded their capacity, but restrictions on passenger-car construction prevented that. Likewise, government regulations encouraged maximum capacity of passenger trains by, for example, ordering non-revenue cars such as lounges to be mothballed. This removed club car *Marina* and observation-lounge *Nob Hill* from service during 1942–46.

The *City*'s meals also took an austere turn owing to wartime food rationing. The two-page prewar menu, offering a full-page of *à la carte* options and five complete dinner selections, shrank to a wartime version with only four meal options. The other inside page carried only an explanation of rationing and a mention of the increase in meals served to armed forces personnel.

POSTWAR CHANGES AND CHALLENGES

By 1944, with the war's end in sight, UP and its partners began planning for postwar travel. The intent was to restore faster schedules and run more trains, including a daily *City of San Francisco*. It took some effort to get SP to increase the service. To compete with the Santa Fe into Los Angeles, UP and C&NW planned to run a daily *City of L.A.* They served notice to SP that it should boost the *City of San Francisco* to daily, or UP/C&NW would withdraw their lightweight equipment from the *San*

Southern Pacific 4-8-2 No. 4349 couples to the *City of San Francisco*'s E2 diesels at Roseville for the climb up Donner Pass during World War II. As trains 101 and 102, the *City of San Francisco* held pride of place in the *City* fleet's numbering system.

J. F. Orem; top, Joe Welsh collection

Left: The steward and waiters stand ready to serve in the 1938 train's 72-seat dining-room car, *Mission Dolores*. Right: Passengers enjoy a meal aboard one of the UP and C&NW 48-seat diners delivered in 1949 for use on the *City of San Francisco* and other members of the *City* fleet.

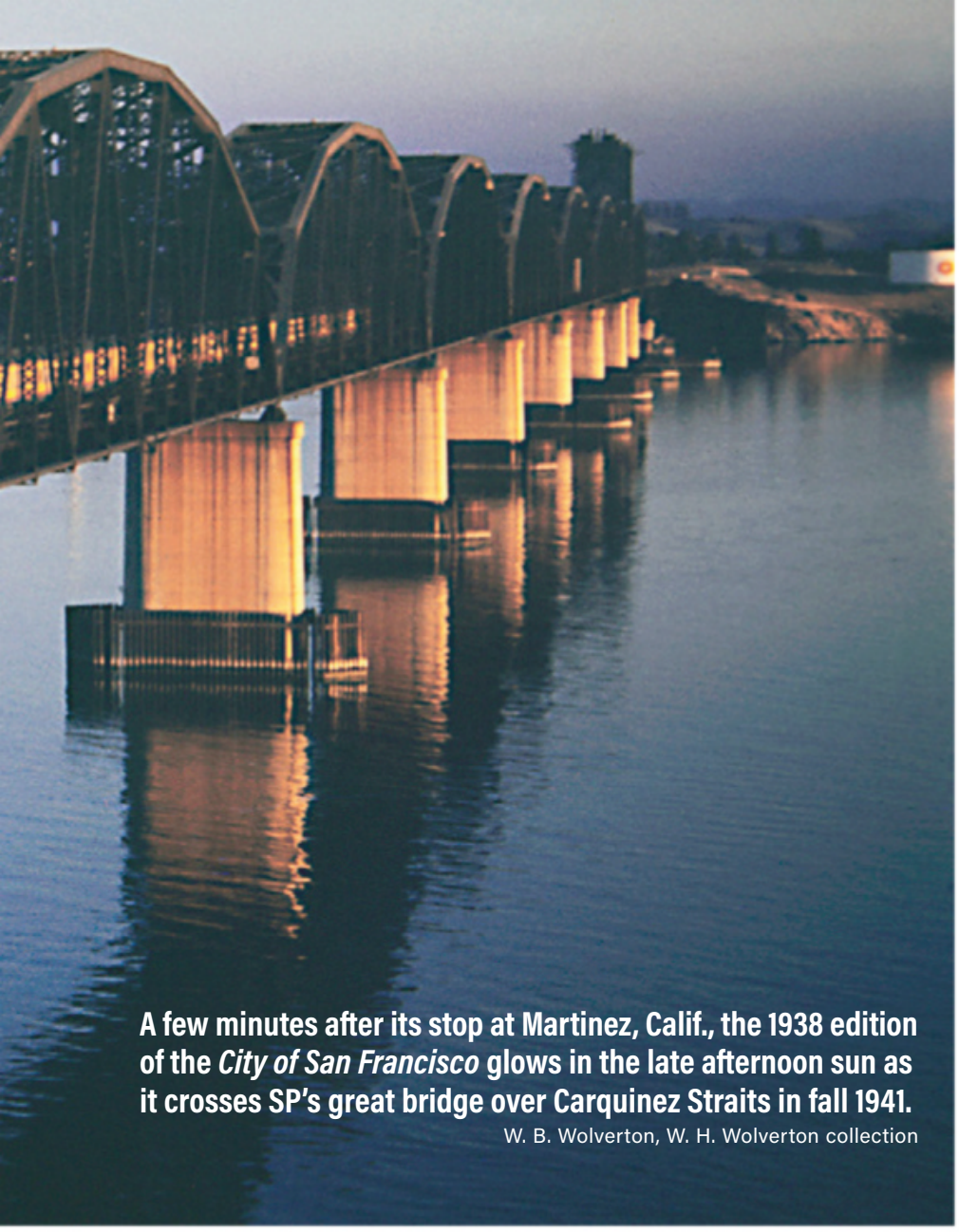
Left above and opposite page, Joe Welsh collection; right above, Union Pacific

Francisco Overland. SP agreed to shorten the *Overland*'s schedule, thereby reducing the number of trainsets required. The equipment released by this change helped create the four consists necessary to run the *City* daily starting September 1, 1947.

Later that year, at UP's instigation the Overland Route partners began determining the future of the cars built during 1937–41, which had operated in an unusual joint ownership arrangement. During 1948–56 this prewar fleet was parceled out among the three partners. Head-end, chair, dining, and lounge cars eventually were renumbered and lost their names.

Operating a daily transcontinental schedule with only four consists left no margin for error. Late trains or bad-ordered cars meant substituting lightweight equipment with older heavyweight cars. SP's Donner Pass crossing and UP's line across Nebraska and Wyoming, both subject to heavy snows, were particularly vexing. New equipment allowed a fifth consist for the *City* starting March 1, 1950. Each trainset was comprised of a roughly 50-50 mix of prewar and new cars. For a time, two of four *City* consists had old observation cars *Nob Hill* and *Russian Hill* on the rear, but by 1950 the train was unique in the *City* fleet in running without an observation car.

Just as the *City of San Francisco* was settling into its new rou-



A few minutes after its stop at Martinez, Calif., the 1938 edition of the *City of San Francisco* glows in the late afternoon sun as it crosses SP's great bridge over Carquinez Straits in fall 1941.
W. B. Wolverton, W. H. Wolverton collection

tine as a daily train, disaster occurred again. On November 12, 1951, UP trains 104, the *City of Los Angeles*, and 102, the *City of San Francisco*, were running east about 12 minutes apart when they encountered a driving snowstorm near the Utah-Wyoming border. With only 200 feet of visibility, and some signals coated with blowing snow, crewmen had a difficult time seeing signal aspects. The locomotives did not have cab signals, and crews were required to stop if they couldn't read a signal. Ahead, a freight had taken siding at Wyuta on the state line, and 104 had had to stop to ascertain three successive signal aspects. As it did so for the third time, 102, coming around a curve at 77 mph in near-whiteout conditions, and not having stopped at any signal, struck 104 with a phenomenal impact. Several cars of the *City of Los Angeles* were destroyed, including NYC observation car *Royal Crest* on the rear, which was split in half for nearly its entire length. Seventeen people died, including the *City of San Francisco*'s engineer. The fact that the Los Angeles train was carrying only 53 passengers at the time kept the toll from being higher.

Just two months later, on Sunday, January 13, 1952, the westbound *City of San Francisco* was trapped in an epic blizzard on Donner Pass. The previous day's train had been halted temporarily by a snowslide and had backed up to change tracks to get through, but SP decided to keep the line open and run its most important trains behind rotary snowplows. With three Alco PAs up front, train 101 bogged down in two large snowslides at 12:15 p.m. near Yuba Gap. The 226 passengers, plus crew, on board were stuck on the train for four days; they all survived, but two men involved in the rescue effort died. [For a detailed account of the ordeal, see "Stranded Streamliner" in Classic Trains' latest special edition, Mountain Railroads.]

DOMES AND DECLINE

Weather wasn't the only threat. Despite expected high traffic demand during the Korean War, the *City of San Francisco*'s revenues kept dropping — along with those of most of America's long-haul trains. In 1948 it earned $3.7 million, but in 1953 it took in only $3 million. Much of the 1953 earnings came from increased mail and express revenues; actual annual passenger revenues had dropped about $1.2 million.

How much of this decline was due to the new *California Zephyr*, introduced in March 1949, wasn't clear, but the popular *CZ* sported five dome cars and ran on a schedule timed for scenery in daylight.

Moreover, Santa Fe in 1954 introduced the Chicago–Richmond (Calif.) *San Francisco Chief*, which included a full-length Budd dome-lounge car. SP had sought to piggyback on the order, but realized that to run those cars, it would have to spend millions to increase clearances in the mountains. Instead, SP built seven unique three-quarter-length dome-lounge cars, with a lower profile, in 1954–55. (UP's ACF domes, introduced on other *City* trains, had a higher profile and did not run on the *City of San Francisco*.) SP assigned three domes to the *San Francisco Overland* between Ogden and Oakland. Not adding domes to the *City* was a missed opportunity to strengthen the train in the face of mounting competition, on and off the rails.

The nature of rail ridership itself was changing, and the *City of San Francisco* got more coaches in the early 1950s. Pullman traffic was dropping, and in November 1954 the *City* lost one of its four lines, keeping a 4-double-bedroom, 4-compartment, 2-drawing-room car; a 10-roomette, 6-double-bedroom car; and a 6-section, 6-roomette, 4-double-bedroom car. The *California Zephyr* had four full sleepers plus a dome-lounge-sleeper-observation, a count that would remain stable into the 1960s. In January 1955, the *City*'s extra fare was eliminated, although the train did bolster first-class choices by moving the daily transcontinental New York–Oakland sleeper from the *Overland* to the *City*. East of Chicago, the New York cars ran alternate days on the NYC and PRR. This service lasted until 1957.

The *City* fleet's route made a big change effective October 30, 1955, when UP terminated its partnership with C&NW and shifted to the Milwaukee Road between Chicago and Council Bluffs, changing the Chicago depot from C&NW's North Western Terminal to Union Station. C&NW cited financial inability to continue the partnership, and some sources pointed to the road's deteriorating track.

The passenger train's general decline through the 1950s also resulted in UP and SP agreeing to combine the *City of San Francisco* with the *City of Los Angeles* east of Ogden, effective September 25, 1960, although they operated separately during summers. At the same time, SP shifted the *Overland*'s Ogden–Oakland dome-lounge to Nos. 101-102 — at last, the *City of San Francisco* had a dome car, but it never ran east of Ogden.

Little good happened to the *City* or any other long-distance train in the 1960s as Americans abandoned trains for super highways and jet airliners. The formerly "Friendly SP" became focused on eliminating its passenger-train losses. UP put on a brave face, but continued to combine trains. In April 1962 the *City* began carrying

The Portland, San Francisco, Kansas City, and L.A. *City* trains ran as one consist east of Ogden toward the end. In June 1970, 11 months before Amtrak, the 5 diesels and 24 cars of the "City of Everywhere" are near Green River.

Bob Schmidt

The *City of San Francisco* dashes through fresh snow at Forreston, Ill., 27 miles west of Davis Junction on the Milwaukee Road. It's November 19, 1955 — three weeks after the *City* fleet stopped using C&NW.

William D. Middleton

Alco PAs approach Auburn, Calif., as they descend the west side of Donner Pass with the *City of San Francisco* in 1967. SP's 64 units constituted the largest PA-PB fleet, nearly 22 percent of the total built.

Classic Trains collection

the *Overland*'s remaining St. Louis–Oakland cars for transfer to UP's *City of St. Louis*, which used the Wabash east of Kansas City. When SP discontinued the *Overland*, five stops were added to the *City of San Francisco*'s schedule.

On-board amenities began declining too. In spring 1961 SP dropped the *City*'s coffee-shop lounge cars, though it would reinstate them during busy periods. In April '63 SP's infamous Automat cars, offering heat-and-eat meals from a machine, replaced the coffee shops west of Ogden in the busy seasons. By 1965 the *City* carried only two Pullmans to Chicago and one to St. Louis, and effective January 4, 1966, the St. Louis Pullman was discontinued, forcing first-class passengers to change cars at Ogden. The short-lived dome-lounges came off the same day, and the full diner was changed to a diner-lounge, which in July was replaced by a coffee-shop lounge. The Automat cars would be discontinued in November 1968, with low-price meals offered in the coffee shop, although both the Automats and the domes would return sporadically between 1969 and 1971.

In October 1967 the Post Office discontinued most of the remaining RPO routes, worsening the revenues of all involved trains. UP passenger revenues dropped 20 percent from 1967 to '68. Aesthetics changed too, as SP's 10 decidedly non-streamlined SDP45 road-switchers in 1967 began replacing the PAs west of Ogden, the *City* being the last assignment for SP's elegant Alcos. The sleek yellow E8s and E9s of UP (and occasionally MILW) stayed in charge east of the SP, however. And the *City*'s

A pair of utilitarian SDP45s, successors to the stylish PAs on the SP's portion of the *City of San Francisco*, bring the train into Ogden on June 7, 1967. Once all-yellow, the *City* has become a hodge-podge of colors.

Gordon Glattenberg; below, Joe Welsh collection

once solid-yellow consist had gradually become a shorter, multi-colored string that included gray and silver SP cars.

One of the *City*'s two Oakland–Chicago sleepers came off in January '68, eliminating the need for a Pullman conductor west of Ogden in favor of a porter in charge. The Pullman Company itself would cease operating sleepers in the U.S. on January 1, 1969, the responsibility shifting to individual railroads.

FINAL YEARS: A FLURRY OF FILINGS

The *City of San Francisco*'s last years saw a parade of legal actions. Citing an annual loss of $926,000 on Nos. 101-102, SP on January 15, 1968, filed with the Interstate Commerce Commission to discontinue the train on February 15. The ICC suspended the application and ordered hearings at on-line cities. These were consolidated with Western Pacific's application to discontinue its portion of the *California Zephyr* between Salt Lake and Oakland. A July 17, 1968, ICC order denied both applications and required the trains continue for one year.

Southern Pacific introduced a $10 first-class passenger charge on the *City* ($5 in coach), although partners UP and Milwaukee Road refused to follow suit. A new SP discontinuance notice was suspended by the ICC on July 7, 1969, pending investigations and hearings. SP withdrew the notice July 15, filing a new petition to change operation to triweekly. After public hearings, the ICC on February 13, 1970, permitted triweekly operation contingent on SP and the Rio Grande arranging to interchange passengers at Ogden or Salt Lake City.

On March 23, 1970, the day after WP discontinued the *CZ*, Rio Grande reduced its train to triweekly but extended it up to Ogden to connect with the *City of San Francisco*. Burlington Northern, which had just succeeded CB&Q in the March 2, 1970, merger, continued to run through cars, which it called "California Service."

A Chicago District Court on June 4, 1970, upheld SP's triweekly operation, a decision challenged by several entities. The U.S. Supreme Court ruled in favor of SP on January 11, 1971, though this was a moot point because, meantime, as the National Railroad Passenger Corp. (Amtrak) was being organized, the ICC issued an embargo on all passenger train-off petitions and other service changes.

Amtrak began on May 1, 1971, continuing Chicago–Oakland triweekly trains 101 and 102 on BN to Denver, UP to Ogden, and SP on west. Beginning without an official name, the Amtrak service came to be the *San Francisco Zephyr*, reflecting its joint route. Meantime, Rio Grande chose to not join Amtrak and, with its share of former *CZ* equipment (minus sleeping cars), instituted its own triweekly Denver–Salt Lake (and briefly, to Ogden) *Rio Grande Zephyr*, operating it until joining Amtrak in 1983.

Amtrak renumbered its long-distance trains effective November 11, 1973, into a single series, and 101-102 become 5-6. After Rio Grande dropped its *Zephyr*, Amtrak adopted the *California Zephyr* name and moved the Denver–Ogden route from UP via Cheyenne and across Wyoming to the Rio Grande through the Colorado Rockies. The train would shift from Ogden to Salt Lake City to proceed into Nevada on the old WP, and during 1980–81 new Superliners replaced Amtrak's hand-me-down cars.

Eventually Amtrak's *CZ* changed its Oakland terminus from SP's 16th Street station, damaged in the 1989 earthquake, to a new depot at Jack London Square, then to a new station not far north in Emeryville. Bus connections across San Francisco Bay continue, and the train remains a popular member of Amtrak's transcontinental fleet, continuing the tradition begun by Union Pacific's 1936 introduction of the Streamliner *City of San Francisco*.

JOE WELSH, a transportation planner living in Maple Valley, Wash., is the author of numerous articles and books on passenger trains including Union Pacific Streamliners *(Voyager Press, 2008). This is his 12th byline in a* Classic Trains *publication.*

MORE ON OUR WEBSITE See sample consists of the *City of San Francisco* from 1936, 1939, 1947, and 1955 at our website, ClassicTrainsMag.com

Big B

Overland ROUTE 150

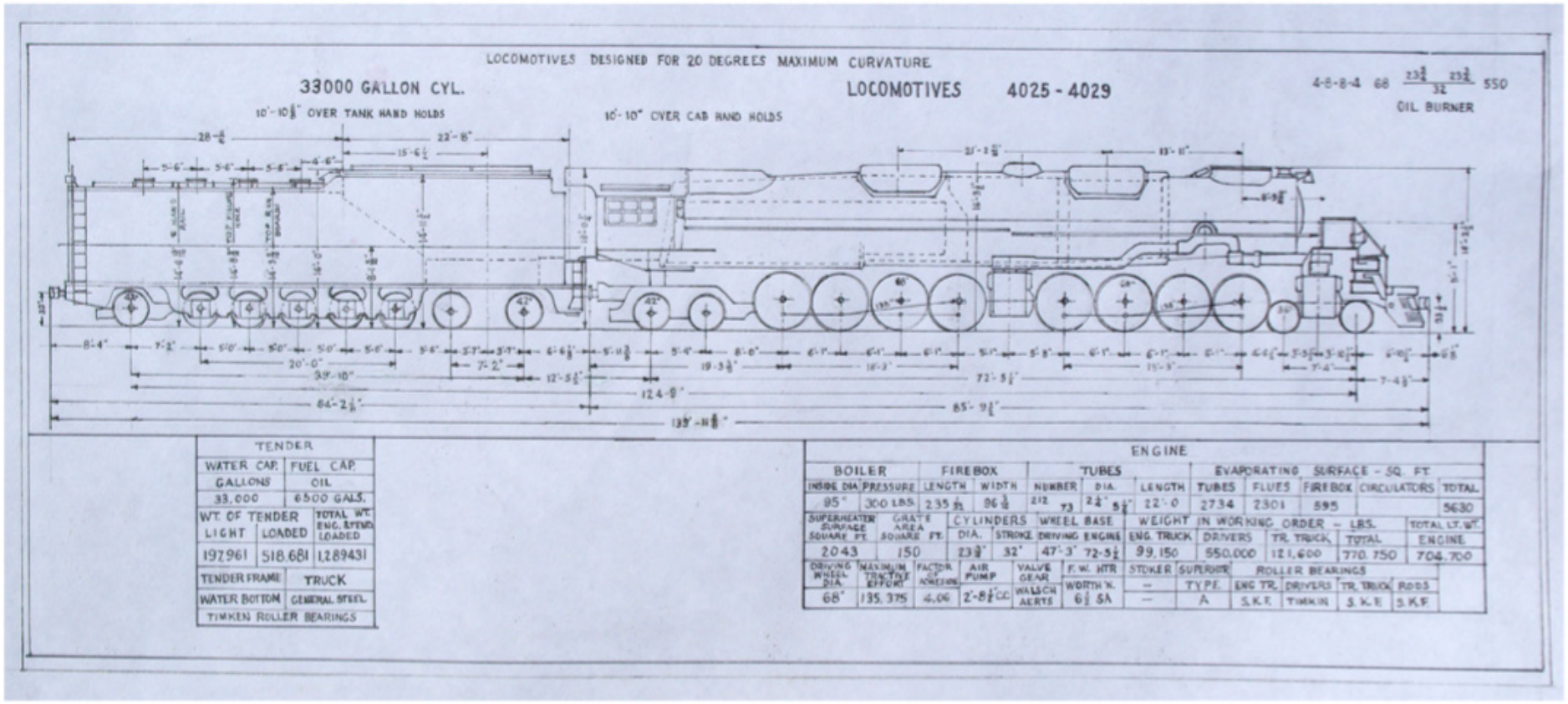
0 1 that might have been

Union Pacific considered ordering a new class of oil-fired 4-8-8-4s for service on its line to Southern California

BY GIL BENNETT

Big Boy 4004, from the 4884-1 class of 1941, makes a stirring sight as it climbs Sherman Hill with a westbound freight in 1958. The proposed 4884-3 class would have been more than 7 feet longer.

Stan Kistler



A Union Pacific drawing shows the principal dimensions of the proposed third group of Big Boys. The engines themselves were similar to the earlier 4-8-8-4s, while the tenders were larger and carried oil instead of coal in deference to their planned assignment to the Los Angeles line.

Gil Bennett collection

Back in the 1970s, my father would take me down to the Union Pacific station in Salt Lake City to see what was going on. It was on one of these trips that he pointed to the large transfer shed to the west of the station and told me, "That is where I saw the biggest locomotive I have ever seen." For years I wondered what that large locomotive was.

Salt Lake City was a stronghold of huge locomotives in the 1940s. The Union Pacific served the area with 2-8-8-0s and 4-6-6-4 Challengers. Western Pacific also had massive 4-6-6-4s that called Salt Lake home, and the Denver & Rio Grande Western had 4-6-6-4s and 2-8-8-2s that were shopped at Salt Lake and used regularly in freight and passenger service out of there. While all those engines were large, my dad would see photos of them and tell me the one he saw was bigger.

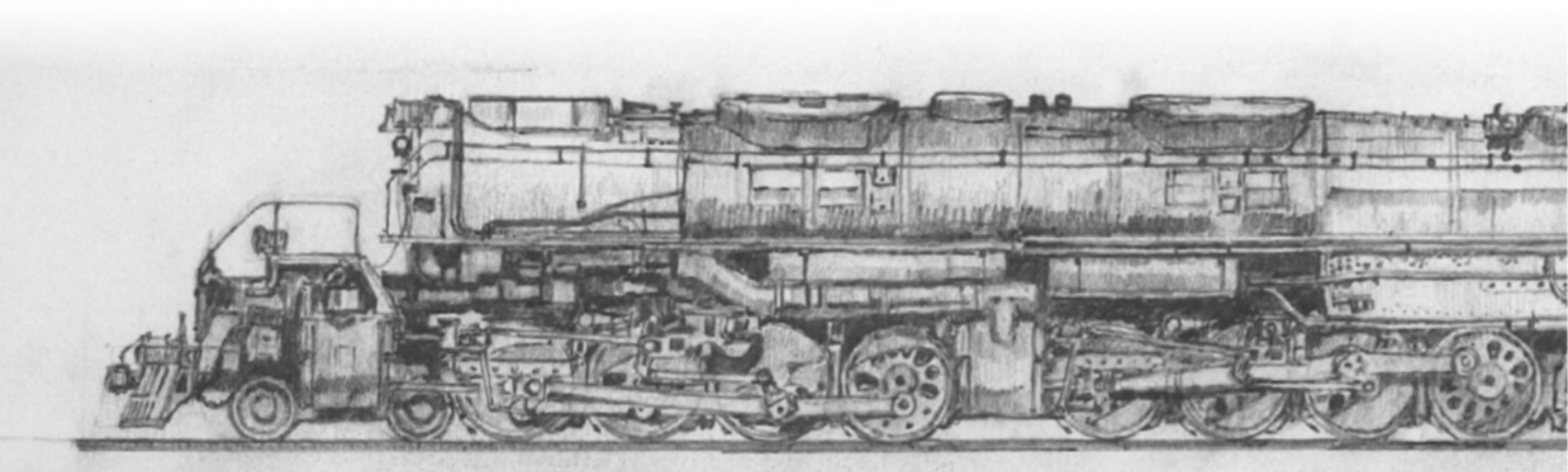
My father was drafted into the Army and reported to a California base in February 1943. After basic training he was able to return home before being assigned. It was after he detrained from a section of the *Pacific Limited* at Salt Lake that he saw the "big" engine. As I would later learn, what my dad saw was a Union Pacific 4-8-8-4 — a Big Boy.

Years later I was commissioned to do a painting of a UP 4-6-6-4. The man who commissioned the painting was Don Davidson, who had worked for the Union Pacific out of Milford, Utah, and later Caliente, Nev., from 1933 to 1976. I asked why he wanted me to paint a Challenger and not a Big Boy. He told me, "A 4000 just had too much power!" Knowing he'd spent his career on UP's line to Los Angeles, and that the 4-8-8-4s' stomping grounds had been east out of Ogden and west from Cheyenne, I asked how he knew the 4000s had too much power.

"I fired 'em," he replied.

WARTIME TRAFFIC CRUNCH

During World War II, traffic on Union Pacific's double-track spine between Omaha and Ogden was heavy, but its single-track Los Angeles & Salt Lake line was saturated. LA&SL trains had to overcome Cajon Pass and Cima Hill in California, plus the grades outside of Las Vegas and between Caliente and Crestline, Nev. Helpers and crews were set up in San Bernardino, Victorville, Kelso, Las Vegas, and Caliente. In addition, there were grades in the Utah desert, although



these lacked the other hills' speed-limiting curvature. Power on the LA&SL was old: 4-6-2s and 4-8-2s handled the passenger trains, while 2-8-2s, 2-10-2s, and 4-10-2s pulled freights. As war traffic got heavy, UP converted some of its early 4-6-6-4s to burn oil and sent them to the LA&SL for freight and passenger service and moved the slower 2-8-8-0s to San Bernardino and Caliente for helper duty.

The LA&SL was an artery for Southern California produce as well as materials from factories in the Los Angeles basin. To make matters worse, a mushrooming complex of defense industries and military training bases added an abnormal traffic burden on that territory. Everything needed to be moved as fast as possible along the LA&SL, from produce to soldiers and war materiel.

In 1941 the UP had received 4-8-8-4s Nos. 4000–4019 from Alco, classified 4884-1. Since the locomotives were so large, the railroad put down heavier rail, eased curves, and expanded clearances. The main line from Cheyenne to Salt Lake City was cleared for the 4000s, as were the lines from Ogden and Granger, Wyo., to Pocatello, Idaho. The LA&SL was also upgraded to handle the Big Boys all the way to Los Angeles, with some track restrictions.

UP put the new engines to work between Ogden and Green River, Wyo., and while they had a few teething problems, they enabled increases in both train speed and length. With the arrival of the heavy Challengers in 1942, the line east of Ogden had the power it needed to keep the war traffic moving. If possible, 2-10-2s and 2-8-2s were used as helpers out of Ogden to expedite the trains over the Wasatch Mountains. A 4-8-8-4 with a 2-8-2 helper could take a train of 4,932 tons up the hill at track speed (40 mph); with a 4-6-6-4 helper the capacity was 5,871 tons at track speed. After the helper was dropped off at the summit, the Big Boy could take the train to Green River.

To help alleviate the problems on the LA&SL, Vice President of Operations E. J. Connors and Superintendent of Motive Power John Gogerty contacted managers at Salt Lake City to see if using some 4000s could help. R. E. Titus, head of the UP operations department in Salt Lake, thought it might be a good idea, but he would have to look into it, as the LA&SL was strictly oil-burning territory, and the Salt Lake turntable was only 100 feet long. However, there was a natural wye where the LA&SL Seventh Subdivision (Salt Lake–Lynndyl), the Provo Subdivision, and the North Yard main line met, and it was possible to turn the 4-8-8-4s there. This is what my father had witnessed back in 1943, a 4000 being turned. There also were wyes at Lynndyl (118 miles south of Salt Lake) and Milford (208 miles).

The operating department assigned 3 Big Boys to the LA&SL, keeping 15 for use east of Ogden and 2 in the shop. The 4000s were used between Lynndyl or Milford and Salt Lake City or Ogden. As the LA&SL lacked coaling facilities, a clamshell loader was stationed in Lynndyl, and coal off the Utah Railway would supply fuel for the locomotives.

BIG BOYS HEAD SOUTH

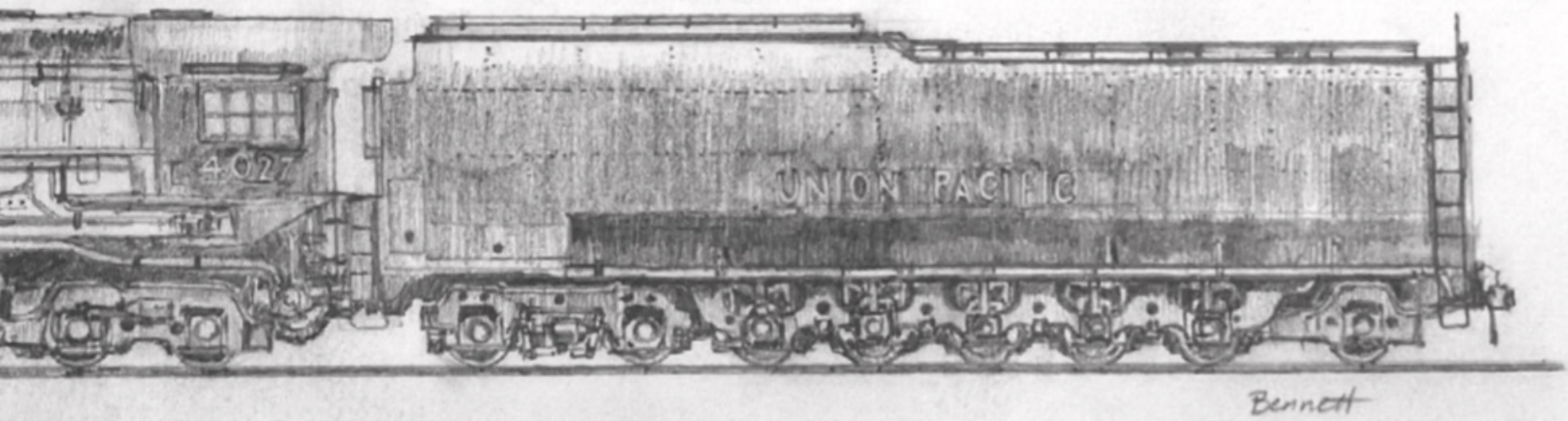
The area the 4-8-8-4s would run included the flat bottom of ancient Lake Bonneville. However, on the north end, the line had to cross a 6,043-foot saddle between the Tintic and Simpson mountain ranges. Speed on the portion from Salt Lake to Lynndyl was limited by 4-degree curves, while the line from Lynndyl to Milford (the LA&SL's Sixth Subdivision) was flat and straight. It was on this segment that late-running passenger trains were able to make up time. Along this racetrack, the 7850-class 4-8-2s would run at 90 mph, and 800-class 4-8-4s and passenger diesels would fly above the century mark. However, troop trains and scheduled passenger trains were being delayed by slow-moving freight trains. A 2-10-2 with a 3,000-ton freight could plod along at 35 or 40 mph on a good day. The 3800-class Challengers could move 4,000 tons at 45 mph, which was better, but both the 2-10-2 and the 4-6-6-4 still needed to take on a helper at Lynndyl for the climb to Boulter Summit. Vice President of Operations Connors wanted this helper district eliminated if possible.

The first Big Boy arrived on the LA&SL in 1943. Its size and the way it handled took some time to get used to.

In February 1943 the first 4000 to arrive on the LA&SL was a big surprise to the engine crews. The size of the locomotive and the way it handled took some time to get used to. The 4000s were UP's first locomotives with roller bearings on

Author Bennett's pencil rendering of a 4884-3 shows piping to the Worthington feedwater heater and the big 4-10-2 oil and water tender.

Gil Bennett



Big Boys compared

Class	4884-1	4884-2	4884-3
Builder	American Locomotive Co.	American Locomotive Co.	American Locomotive Co.
Year built	1941	1944	Not built
Numbers	4000–4019	4020–4024	4025–4029
Length over couplers	132 ft. 9⅞ in.	132 ft. 9⅞ in.	139 ft. 11⅝ in.
Wheelbase	117 ft. 7 in.	117 ft. 7 in.	124 ft. 9 in.
Weight in working order	Engine: 762,000 lbs. Tender: 427,500 lbs. Total: 1,189,500 lbs.	Engine: 772,250 lbs. Tender: 436,500 lbs. Total: 1,208,750 lbs.	Engine: 770,250 lbs. Tender: 515,681 lbs. Total: 1,289,431 lbs.
Tractive effort	135,375 lbs.	135,375 lbs.	135,375 lbs.
Factor of adhesion	4.02	4.03	4.06
Fuel	Soft coal	Soft coal	Oil
Boiler pressure	300 psi	300 psi	300 psi
Driving wheels	68 in.	68 in.	68 in.
Superheater	Type E	Type A	Type A
Stoker	Standard modified type B	Standard modified type B	None
Tender capacities	28 tons coal 24,000 gal. water	28 tons coal 25,000 gal. water	6,500 gal. oil 33,000 gal. water
Tender whl. arrgmnt.	4-10-0	4-10-0	4-10-2

all axles, which, according to former fireman Don Davidson, caused some excitement when stopping. Also the firemen, accustomed to oil, had to get used to working with coal. The 4-8-8-4s were rated at 4,200 tons over Boulter Summit.

At the beginning of 1943 the LA&SL was moving some 1,800 freight cars a day (about 25 trains), plus passenger and troop trains. Traffic was expected to increase by 50 percent during the year. Eastbound, trains of 2,800 tons would be brought into Milford and staged. Freight trains would be sandwiched between the faster passenger trains. At Milford two freights would be combined and a single Big Boy would take them east. According to Davidson, a 4000 could keep a 5,600-ton train running at around 60 mph, and if pushed could make 65. Fruit blocks were kept at 5,500 tons, or 100 cars, which was the length of the sidings. At Lynndyl, the engine would take on coal and water and the tonnage would be adjusted, or a helper added for the run up the 39-mile, 0.8-percent grade to Boulter Summit.

The three 4000s on the LA&SL were doing the work of eight smaller locomotives, freeing up crews and power for use elsewhere. Train weights from Milford varied, with the average being around 5,000 tons, which a 4-8-8-4 could take from Milford to Salt Lake City without a helper. There the engine would either continue on to Ogden with the train, or be taken off, serviced, and turned for another trip west.

Westbound, a 4000 would leave Ogden with whatever the yardmaster could tie behind the tender and head to Salt Lake. There the locomotive would be refueled and serviced to go on the LA&SL. At Lake Point, 20 miles from Salt Lake, the grade started and continued 60 miles to Boulter Summit. Westbounds did not get helpers, as more empties headed west and the limit was siding size and not weight. Water could be taken at Erda, Stockton, or Faust while waiting for opposing traffic, and coal and water at Lynndyl. The train would then take the racetrack to Milford, where the locomotive would be turned, recrewed, watered, and coaled.

East out of Milford, a 4000 would usually follow a passenger or troop train. If water was needed it could be taken at Black Rock, Clear Lake, or Delta while waiting for opposing traffic. At Lynndyl the locomotive would be coaled, watered, and serviced. If there was heavy opposing traffic and a loss of time waiting in sidings, then water would be taken at Tintic or Faust. As traffic got more fluid, the three LA&SL Big Boys were cut back to the Lynndyl–Salt Lake–Ogden pool, with the 3800-series Challengers working west of Lynndyl.

The 4000s worked well on the Sixth and Seventh subdivisions. They increased both train speed and overall tonnage per train. With 68-inch drivers and high-horsepower boilers, the locomotives were able to operate at the top of their performance curve.

The surge in traffic during 1943 caused UP to reassign some of its larger power.

Big Boys 4014 and 4022 — 2.4 million pounds of power — approach each other at Cheyenne in 1958. Engine 4014 is set to return to steam this year as part of UP's commemoration of the 150th anniversary of the Golden Spike.

Stan Kistler

Traffic between Ogden and Cheyenne was so heavy that every siding had a train in it. To keep things moving on that part of the Overland Route, the 3800- and 3900-class 4-6-6-4s were moved west of Green River, and some of the 9000-class 4-12-2s were moved west of Cheyenne. The three LA&SL Big Boys moved east, joining the rest of the class working east out of Ogden. New oil-fired Challengers replaced the 4000s on the LA&SL; although they didn't have the same pulling ability as the 4000s, they were faster.

Besides reassigning existing locomotives, UP ordered new ones. Otto Jablemann, the mechanical engineer responsible for the road's final steam designs, wanted to acquire freight diesels, particularly for the mid-section of the LA&SL where decent water was scarce, but the War Production Board would not let the UP have any. So in mid-1943 the road returned to Alco with orders for more 4-8-4s, Challengers, and five Big Boys (Nos. 4020–4024, the 4884-2 class) intended for the territory east of Ogden. These were delivered in 1944.

A THIRD CLASS OF BIG BOYS?

Traffic on UP's lines showed no sign of letting up. Military officials estimated the war would last until at least the end of 1946 and maybe early 1947. This meant the UP needed still more power. Plans were drawn up to supplement and then replace the aging 4-12-2s used east of Cheyenne with a new class of 20 4-8-4s with all-weather cabs and larger tenders than those used on earlier 4-8-4s.

More significantly for our story, the railroad developed plans for new engines to work on the LA&SL: five oil-burning Big Boys, to be numbered 4025–4029. Patterned after the 4884-2s, they would weigh slightly less (770,750 lbs. vs. 772,250) because of their lack of stoker equipment, but would have 5,000 lbs. more weight on the drivers. (The original 20, built before wartime restrictions on lightweight materials, tipped the scales at only 762,000 lbs.) The combined loaded

weight of the locomotive and tender would be just shy of 1.3 million pounds.

The biggest external difference would be the tenders. To decrease water stops, the tender grew from 25,000 gallons to 33,000 gallons. A centipede type like those used by other modern UP power, it would have eight axles in a 4-10-2 configuration. Axle weight would be less than 65,000 lbs. When the first 4-10-0 centipede tenders were designed, the UP was worried that they would be too stiff while backing around curves, and some did derail on tight curves. The tender for the LA&SL Big Boys would have a two-wheel truck that would guide the tender as it backed, alleviating this problem.

The bigger tender increased overall length. Engines 4000–4024 stretched 132 feet 9⅞ inches over coupler faces. The planned Nos. 4025–4029 would measure a whopping 139 feet 11⅝ inches. Wheelbase would be 124 feet 9 inches, considered the maximum that could fit on a 126-foot turntable. Caliente, Nev., and Cheyenne, Wyo., had tables that large, and would define the limits of the new 4-8-8-4s' territory.

Designers considered an all-weather cab for the 4025-series engines, but that

In a painting by author Bennett, engine 4027, one of the five never-built oil-burning Big Boys, approaches Utah's Boulter Summit with a freight train heading for Salt Lake City.
Gil Bennett, Hallberg Collection

would have made the wheelbase too long. Instead the new locomotives would have cabs with two folding doors on the rear, like those on the 1941 and '44 Big Boys.

Worthington Pump & Machinery Corp. at this time was touting that its improved feedwater system caused less mineral build-up in the boiler. The 4884-1s and 2s had Elesco steam injectors, as there was no room in the smokebox for the feedwater heater, and the UP wasn't sure the Worthington SA type could supply the water needed to keep the 4000s going. The 3800-series 4-6-6-4s were built with Worthingtons, but some were changed over to Elesco steam injectors after World War II. The 4884-3s would have had 12 inches added to the smokebox front to equip them with a Worthington SA, which would able to supply

The combined loaded weight of the locomotive and tender would be just shy of 1.3 million pounds.

14,500 gallons per hour to the boiler.

The 4884-1 class had Type E superheaters, but UP switched to the Type A for the 4884-2s. The 4884-3s would also have gotten Type As.

Cheyenne was the main shop for Big Boys 4000–4024. Since Pocatello, Idaho, was the main shop for UP's oil-fired steam power, engines 4025–4029 would have gone there for major overhauls. It is not known if any 4-8-8-4s ever ran in Idaho, but if the 4025 class had been built they would have run there regularly.

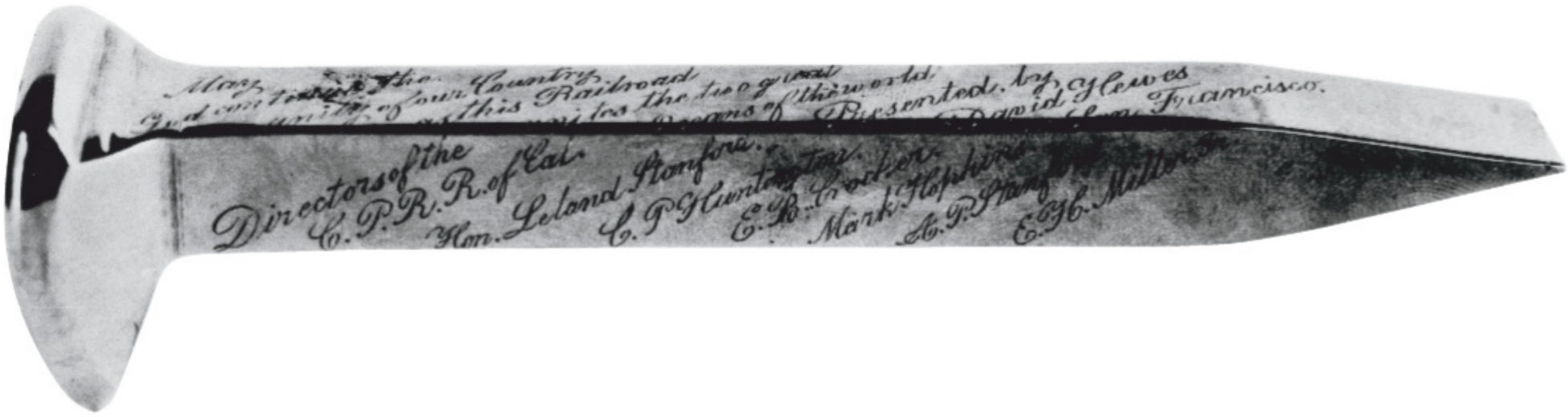
In 1946, UP converted No. 4005 from coal to oil firing as an experiment. The road used a Thomas burner, which heated the 150-square-foot firebox unevenly. Although the engine was easy to fire, the firebox "leaked like a sieve," and the 4005 soon reverted to coal. Had it built the 4884-3s, Alco would have drawn on its experience with the 152-square-foot fireboxes on the oil-fired 4-6-6-4s it had produced for the Spokane, Portland & Seattle.

Union Pacific never ordered a third group of Big Boys. The advent of the atomic bomb brought the war to an end in August 1945, much earlier than anticipated. As traffic ebbed, plans for the 4884-3s were shelved. The 4000s closed out their careers in 1959, running west out of Cheyenne up Sherman Hill. However, there was nine-month period when Union Pacific's largest locomotives regularly ran south of Salt Lake City on the LA&SL to move the traffic of war. ■

GIL BENNETT has produced more than 2,000 watercolor and oil paintings, mostly of rail subjects, since becoming a professional illustrator in 1984. This is the Utah native's second byline with us, following "Big Boy with Wings" in Winter 2010.

UNdriving the Golden Spike

BY JEFF TERRY, THORNTON H. WAITE, AND JAMES J. REISDORFF



The famed Golden Spike, driven at Promontory on May 10, 1869, was engraved with the names of the officials present for the ceremony. Less than 75 years later, that first line was sacrificed to fill metal needs during World War II.
Southern Pacific

By the 1940s, the original transcontinental main line around the north end of the Great Salt Lake had fulfilled its original purpose, and its 120 miles of steel rails were needed for World War II. The Promontory Branch, as it was known by then, ran through the desert from Corinne through Promontory to Lucin. It had not been profitable for Southern Pacific since the Lucin Cutoff across the Great Salt Lake was completed in 1904, but was kept intact as a secondary route. Traffic consisted of a weekly mixed train and occasional extra freights in peak harvest season.

SP first tried to abandon the Promontory Branch in the early 1930s after decades of losses. On April 3, 1933, in the midst of the Great Depression, the road petitioned the Interstate Commerce Commission for permission to cease operation over the majority of the line between Kelton and Lucin, 55 miles.

The first abandonment hearings were held by the Public Utilities Commission of Utah on behalf of the ICC. The high desert land around Promontory was used primarily for grazing cattle and wintering sheep, and several shippers and ranchers protested the abandonment, stating that the railroad was needed to haul in feed for their animals since the few dirt roads in the area were not passable in winter. However, there were was very little other opposition. By the 1930s just 60 families lived in the region, so passenger traffic was negligible, with a single coach or the train's caboose being adequate for the few travelers carried.

A surprise objection came from the U.S. government, which opposed the abandonment as it desired to keep the Promontory Branch intact either as a backup for the route across the Great Salt Lake or as a secondary main line in the event of war. It reminded SP that since the line had been part of the original transcontinental route and the land grants associated with it, the company had a moral (but no legal) obligation to maintain it.

SP countered the arguments by showing that it lost money operating the branch. The parties in favor of keeping

Overland ROUTE 150

Everyone knows about the driving of the Golden Spike,

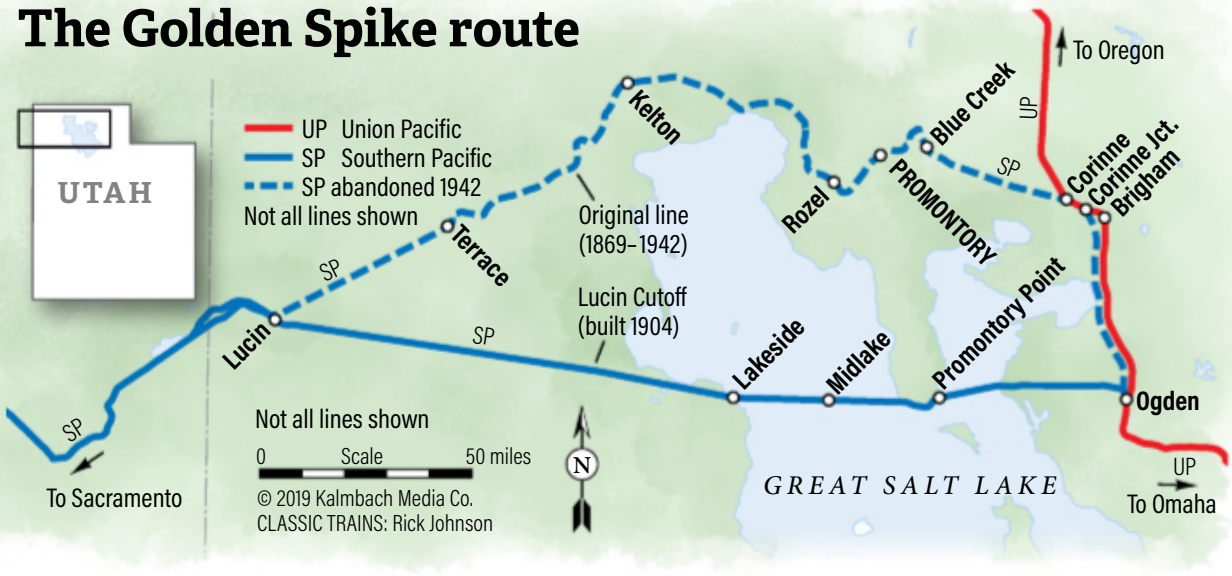
but not many know about Southern Pacific's fight to abandon part of the original transcontinental railroad, or the "un-driving" ceremony that followed.

Locomotive 311 of scrapper Hyman-Michaels waits with the crowd near the Last Spike obelisk for the un-driving ceremony to start on September 8, 1942.

Classic Trains Collection

Guests for the un-driving ceremony were treated to a chicken dinner at the Hyman-Michaels work camp at Rozel, 8 miles west of Promontory.

Classic Trains collection



the line intact claimed that the losses incurred in its operation were insignificant to the Southern Pacific's overall finances.

Based on these and other considerations, the ICC concluded that benefits to the sheep and cattle industry outweighed any inconvenience to the railroad — even though SP was only proposing to discontinue operations and to keep the line in serviceable condition. Thus, the initial abandonment effort failed when the ICC denied the petition on June 11, 1934.

SP was not willing to give up so easily. The petition was reopened on December 12, 1934, this time covering the Kelton–Lucin segment. Although the railroad's operating deficit had decreased, this was primarily due to a reduction in maintenance. After years of neglect, the Promontory Branch was in poor shape — the track was deemed only "passable." Future revenues were estimated to be unchanged. In spite of all of these factors the ICC again denied the petition to abandon on March 17, 1936.

Despite the ICC ruling, on March 31, 1937, the SP essentially abandoned the western part of the branch. This was accomplished by providing only "on-call" service between Kelton and Lucin after the Public Utilities Commission of Utah gave the railroad permission to discontinue regular service. Trains now operated on Wednesdays from Ogden to Kelton as required. Passenger service was discontinued three years later, in April 1940.

In March 1942, three months after the Japanese attack on Pearl Harbor, SP again proposed abandonment — this time for the entire 120.8 miles between Lucin and Corinne. Traffic between Kelton and Lucin, mainly animal feed and livestock, had not changed much in the six years since the first abandonment hearings. One of the only gains was from the Rosette Asphalt Co. of Rozel, which was shipping out drums of asphalt at a rate of one carload a month, up from one or two annually in previous years. The expense of operating the line from Corinne to Dathol (Corinne Junction) was $5,288, much greater than any income brought in by the minor increase in traffic.

Now was the time to tear up the line, Southern Pacific argued, because the rails were materials "urgently needed at the present time" due to the war. Additionally, in stark contrast to its earlier opposition, the federal government supported the abandonment since the gains to be made from rail salvage outweighed any possible role the branch could play in wartime traffic.

Once again abandonment hearings

Beyond the raised hat in the foreground, SP's L. P. Hopkins, Utah Gov. Herbert Maw, and UP's E. C. Schmidt stand with the just-removed "Last Spike," undoing 73 years of history. Often called "Promontory Summit," the location was simply "Promontory" to SP and in the *Official Guide*.

Classic Trains collection

were held, and once again there was opposition. It was noted that many of those protesting did not ship by rail, chief among them local chambers of commerce and other civic groups. Box Elder County stated it did not want to lose the property taxes paid by the railroad.

This time the ICC quickly approved abandonment, with an effective date of June 11, 1942. It was stipulated that SP would sell the 4.8 miles between Corinne and Dathol to Oregon Short Line, a Union Pacific subsidiary, and the remainder of the line would be scrapped and the rails turned over to the U.S. Navy.

Salvage operations began almost immediately. A contract to lift the rails was awarded to Hyman-Michaels of Chicago. This firm had been salvaging rail lines for many years; now it was to dismantle the most historic of them all.

Scrapping of the branch started near Corinne on July 1, 1942, with the gang working westward. SP required Hyman-Michaels to provide its own motive power, which consisted of former Minneapolis & St. Louis 2-6-0s Nos. 311 and 319. Through the next two months, the scrappers moved across the desert, salvaging rails, ties, and all other hardware for reuse. By mid-August they were camped at the Blue Creek water tank east of Promontory, and by early September their outfit train had been relocated to Rozel, 8 miles west, where water was available for the men and the locomotives.

Lost to time are the details of who conceived the idea of an "un-driving" ceremony to pay homage to the original event. However, out of that person's proposal came a coordinated effort to arrange for an event that local and state politicians, civic and business leaders, and members of the military and the media could see history reversed. The ceremony was to be part patriotic fervor, part photo opportunity, and part social function. Essential to the plan was the support of Hyman-Michaels, whose owners backed the "un-driving" as a way to obtain publicity for their firm.

By August 1942 the press reported that "within a few weeks" there would be a special ceremony to commemorate the un-driving of the Golden Spike. The date was originally set for September 4, when the scrap gang expected to be at Promontory. However, it was later moved back to September 8 because Hyman-Michaels was behind schedule due to the wartime labor shortage. Workers were hard to come by even at top wages of 75 cents an hour. Additionally, the scrappers were hampered by having to burn thick brush off the track before pulling up the rails. Range fires were a major a concern, because if one got out of control it would pose a danger to adjoining grain fields and grazing lands, so the work was slowed to ensure that no such event occurred.

After removal, track material was forwarded to the Clearfield Naval Supply Depot south of Ogden and other military installations for reuse.

CLASSIC TRAINS collection

Meanwhile, for the un-driving ceremony, Southern Pacific prepared a special spike in its Ogden shops. Newspaper reports from the time do not indicate what was "special" about it, although it was presumably a steel spike dipped in brass or painted to give it the appearance of gold. It was presented for the ceremony by SP's Salt Lake Division Superintendent L. P. Hopkins, but whether this spike was used during the "un-driving" uncertain.

The weather was warm and mild on September 8, 1942. An automobile caravan, headed by Utah Gov. Herbert Maw and a police escort, departed from Salt Lake City early that morning. Stops were made at Clearfield and Ogden to pick up representatives from the Navy and SP. While in Ogden, Maw took part in a special program about the un-driving that was broadcast over radio station KLO.

The caravan then continued to Brigham City, Corinne, and past Promontory to Rozel, where Everett B. Michaels, vice president of Hyman-Michaels, treated 88 guests to a chicken dinner with all the trimmings served under the direction of camp manager Jack Carson. Afterwards, the caravan traveled back the 8 miles to Promontory.

To re-create the 1869 ceremony, Hyman-Michaels' two locomotives were positioned facing each other at the obelisk monument that had been erected decades earlier to mark the Last Spike location. A crowd of about 300 persons witnessed the un-driving — about half of the estimated 600 that attended in 1869.

Frank Francis, columnist for the *Ogden Standard-Examiner*, was master of ceremonies for the event, which started at 2 p.m. and lasted 30 minutes. George Albert Smith, a member of the Quorum of the Twelve Apostles of the Church of Jesus Christ of Latter Day Saints, gave the invocation. Removal of the "Last Spike" then commenced. Newspapers reported that Mrs. Ralph Talbot Jr., wife of the commanding officer of the quartermaster depot in Utah (and whose great-uncle had attended the 1869 event), presented Maw with a claw bar. Maw used it to raise the spike an inch from its position in the tie, followed in succession by E. C. Schmidt, assistant to the president of the Union Pacific; SP Division Superintendent L. P. Hopkins; and Everett B. Michaels, who removed the spike as the crowd cheered.

With the driving of the Golden Spike having occurred only 73 years earlier, there were two attendees in 1942 that had been present at the original ceremony. One was 85-year-old Mary Ipsen of Bear River City, Utah, who at age 12 had been a cook's helper at Promontory on May 10, 1869. Ipsen reminisced that she "got to eat whatever was left over after the construction workers had gotten their fill." The other was Israel Hunsaker, then 90, who'd been a track worker on the line and helped to lay the rails over Promontory Summit. He was reported to have attended the "Wedding of the Rails" and appears in A. J. Russell's famous "champagne photo" [page 4] as a young man in the front row, fourth from right, although some historians dispute this claim.

Other participants with ties to the first event included William C. Warner, then 86 years old, who, as the SP's oldest pensioner, started work for the Central Pacific in 1870. Cora R. Gibbs also attended; her father, Edgar Stone, claimed to have been the engineer on CP's *Jupiter*. (There has been debate over whether Stone or another person, George Lashus, was engineer of the *Jupiter* at the ceremony; other records show the engineer as being George Booth.)

Following the un-driving, visitors and dignitaries quickly departed, and the scrappers wasted no time in getting back to the task at hand. Photographs suggest the scrap gang made short work of tearing up the main track upon which the ceremony had just been held, with some

area residents who attended the event lingering to watch the rails be removed.

The 1942 ceremony resulted in several relics from the occasion, some now clouded in mystery. Following the un-driving, the spike SP prepared for the event was presented to the Daughters of Utah Pioneers, and was exhibited for a time at the Utah State Capitol in Salt Lake City. However, its current whereabouts are unknown.

A small, rusty iron spike removed from a cross tie, which supposedly occupied the same position as the original one into which the Golden Spike had been driven, was presented to Brigadier-General Ralph Talbot Jr., by E. G. Schmit of the Union Pacific. The spike was later included in a glass-covered display that eventually wound up in a back room at the quartermaster depot at Ogden, largely forgotten until it was rediscovered many years later. Unfortunately, with all witnesses deceased, there is no way to confirm its authenticity.

The two rails that corresponded to the position of the last two rails originally laid in 1869 were donated to officials from Brigham City and Ogden, respectively. While the section that went to Ogden has been lost, disposition of the rail given to Brigham City is readily known, since members of the Box Elder Junior Chamber of Commerce were determined that Brigham City would remember the day that it was un-spiked. In December 1943, a marble marker incorporating the rail was dedicated in a public ceremony at the southwest corner of the Box Elder County Courthouse; today it's displayed near Brigham City's former UP depot.

The 1904 completion of the Lucin Cutoff across the Great Salt Lake relegated the original transcontinental main line to the north to secondary status, leading to its eventual removal.

A. P. Hill collection

It took Hyman-Michaels another month after the un-driving ceremony to complete the removal of the Promontory Branch, working at a rate of up to 3 miles per day. Its contribution to World War II was significant; the Navy utilized the rail to build sidings and spurs at Utah's Clearfield Navy Supply Depot and at the Army's Defense Depot Ogden Utah — both major hubs of activity during the war. Some of it was also reportedly used at the arsenal at Hawthorne, Nev. At 120 miles, the Promontory Branch was the longest single line abandonment in the U.S. during 1942.

With its rail line now history, many predicted that the future for Promontory was bleak. Although the obelisk monument remained by the abandoned right of way, there were precious few reminders of the historical event that had occurred there. There were seldom any visitors, as it was a long drive along a rough dirt road to reach the location.

In the next two decades a few scattered events were held to celebrate the driving of the Golden Spike, most notably in 1949 when railroad enthusiasts Lucius Beebe and Charles Clegg re-enacted the ceremony at Promontory, but most of the anniversaries were held at Corinne, a much easier location to reach. In the 1950s the Sons of Utah Pioneers opened the Railroad Village Museum in Corinne, with two early 1900s-era steam locomotives situated face-to-face in the "Promontory pose."

For one local resident, Bernice Anderson, simply looking at old pictures and old engines in a museum wasn't enough. She wanted the site of the Golden Spike to be saved and recognized, and after many years of lobbying, the National Park Service created the Golden Spike National Historic Site in time for Promontory's 100th anniversary in 1969. Ten years later, in 1979, replicas of Union Pacific's No. 119 and Central Pacific's *Jupiter* were constructed and are used today for re-enactments.

In a span of 73 years, Promontory went from being the historic location of the completion of the nation's first transcontinental railroad to a siding on a secondary branch line to an abandoned right of way with only a stone monument remaining to mark the ceremony that joined the nation. It can be debated whether or not the events that took place at Promontory in 1942 nearly destroyed a major part of American history under the guise of patriotism, but fortunately, because of preservation efforts over the past five decades, Promontory is now recognized for its role in American history and serves as living reminder of the events that took place 150 years ago.

JEFF TERRY is a Utah native, railroad photographer, and historian who lives near St. Paul, Minn. He is a rules instructor for Canadian Pacific in the Twin Cities. THORNTON B. WAITE lives in Idaho Falls, Idaho, and has written several books and numerous articles on railroad history. JAMES D. REISDORFF is a freelance writer and publisher from David City, Nebr. His South Platte Press has published more than 100 books, mostly on western railroad topics, since 1982. That includes The Un-Driving of the Golden Spike, *released in 2013, by the same authors, on which this story is based. The book is available at www.southplattepress.com.*

Overland ROUTE 150

BY SHIRLEY BURMAN

Photos by Richard Steinheimer and Shirley Burman

SUMMER OF CHANGE ON DONNER PASS

In 1984, Southern Pacific workers replaced one of the

August 29, 1984: Donner Lake and the west portal of Tunnel 11 are visible in a view from an SP crane at the Shed 37 work site.
Shirley Burman

last wooden snowsheds with a concrete structure

Light filters through the cracks in Shed 33, located not far west of the Shed 37 work site. The venerable wooden structure protected generations of Tunnel Motors, F units, and cab-forwards.
Richard Steinheimer

It was a balmy July day in 1984 as an old Southern Pacific track car rumbled over the rails on the eastern slope of the Sierra Nevada range, in the shadows of Donner Peak. The car and its three passengers — an SP employee, Richard Steinheimer, and me — were riding out to a construction project at Snowshed 37, located between Tunnels 8 and 9 on Donner Pass. Workers were replacing the last wooden section of Shed 37 with a concrete structure.

We usually walked out to the construction site after parking a mile or so west near Summit. On this day we were lucky and caught a ride with SP bridge-and-building crew member Lindy Hensley, who was making a delivery to the site.

As we passed through Shed 33, the old wooden structure showed its age, with streaks of light coming through the cracks of decaying wood. Next, at the very top of the pass, we entered historic Tunnel 6. I could barely make out the chiseled walls by the dim light of the track car. No boring machines were available in the 1860s to help the thousands of mostly Chinese laborers who had the formidable challenge of chipping and blasting their way through solid granite to make this 1,660-foot-long tunnel.

It had only been a few months before when Dick first showed me around SP's line over Donner, pointing out the remaining few different types of sheds built over the years. Where once there had been more than 35 miles of snowsheds and tunnels, only a few sheds remained. With modern snowfighting equipment, there was less need for them.

After the heavy snowfall of the 1982–83 season, Dick had observed an SP inspection crew checking the remaining wooden portion of Shed 37 for damage. Workers added reinforcements to hold up the roof after another heavy snow in 1984 that nearly buried the houses at Norden, SP's outpost near the top of the pass. By July the deep snow was only a

THE OLD WOODEN SHED SHOWED ITS AGE WITH STREAKS OF LIGHT COMING THROUGH THE CRACKS OF DECAYING WOOD.

The remains of the wooden section of Shed 37 lie beside Track 1 on July 7, 1984. Next, workers will remove the debris and build footing forms.

Richard Steinheimer

In a July 30 view facing the opposite direction, Steinheimer (center right) crouches to photograph workers getting the forms ready for concrete.

Shirley Burman

Men pour concrete in the footing forms on July 30. Clinging to the hillside in the background is another transcontinental artery, the old Lincoln Highway; Interstate 80 is nearby as well.

Richard Steinheimer

memory, and the track car emerged from the tunnels and we were met with beautiful blue skies and mild weather.

Our reason for being here began in the last week of June 1984. We were driving west from Truckee, Calif., past Donner Lake up old Highway 40 approaching the highest point of SP's route over the Sierras. We looked up and saw another wooden snowshed gone — heaps of freshly cut timbers were strewn about the hillside. As we approached the summit parking area we noticed small house trailers recently moved in, but no one around. We returned a week later and, seeing cars by the trailers, knew a work crew had arrived. We parked our van and began the hike out to the construction site. I couldn't describe it as walking — it was more like stumbling our way through the eerie, dark tunnels and sheds.

After exiting Tunnel 7 we crossed over the lower stone embankment called the "China Wall" that filled in the gap that was once used as the Emigrant Trail crossing and the route of the Donner Party survivors who passed through in 1847. Central Pacific laborers filled in the gap with stone to support and level this section of track. Next was Tunnel 8 and the previously completed concrete portion Shed 37, and then the just-demolished wooden section of the shed.

We found the project boss, Dick Carter, and we each produced our official letters allowing us to be on any SP railroad property without an escort (each of us, separately, had done work for SP before). Carter gave us the OK to photograph the shed reconstruction project.

We always traveled with our hard hats, and wore them anytime we were on railroad property. Carter may have thought we'd just show up a couple of times and be gone, and even I wasn't sure what our plans were, but we knew this was a once-in-a-lifetime chance to see and photograph how the route of the first transcontinental railroad was carved into the mountainside. This self assignment also came at a time when we were "gainfully unemployed," enabling us to travel to Donner Summit once or twice a week, sometimes camping out in our van for two days at a time.

While talking to Carter, we observed the Sacramento Division engineers surveying the western end of the concrete sections of Shed 37 connecting to Tunnel 8 for placement of the lower footings and roof panels. On the east end, forms were being constructed for footings that would hold the weight of 6-ton side panels.

With Donner Lake far below them, SP workers prepare for an explosion on August 28. The blast will remove material as part of the work on the upper, roof-supporting footings.
Richard Steinheimer

WE ALWAYS TRAVELED WITH OUR HARD HATS, AND WORE THEM ANYTIME WE WERE ON THE RAILROAD.

BOOM! Viewed from a safe distance, smoke rises from one of the explosions that precede construction of the upper footings for the shed roof.
Richard Steinheimer

First panel up: On August 29, the first concrete side panel of the 1984 Shed 37 project is bolted into place. Two workers look on from the roof of a section completed in a prior year.
Richard Steinheimer

The next morning, on our first full day on the site, trucks carrying concrete arrived at Shed 33. Their cargo was transferred into huge concrete buckets on flatcars to be moved to the construction site. After pouring concrete into the first footing forms, the push was on to build more forms. We kept our distance — like flies on the wall, we were there but seldom seen. Only during lunch breaks did we talk with the workers.

While the lower footing frames were going in, the crews began to work on upper footings for roof panels. Carter said that this shed was easier going than others, because the original back wall was still in place and the crew didn't have to build one. When we first arrived on-site and I saw the ladder the men used to access the upper portions of the work, I told Dick he could shoot all the overhead views. I wasn't going to climb that ladder!

Dick and I visited the work off and on throughout the summer and early fall. After a final day of construction photography on November 3, 1984, we were married in Virginia City, Nev., on November 4. When we returned on the 5th, workers were burning the wood from the footing forms and cleaning up the site.

Reduced traffic levels, combined with the expense involved in maintaining the original line over the top of the pass, prompted the railroad to use Track 2, constructed in 1925, for all trains. In 1993, just nine years after the Shed 37 replacement project that Dick and I documented, Southern Pacific closed down the historic Track 1 over Donner Summit. ■

SHIRLEY BURMAN and RICHARD STEINHEIMER formed a personal and professional team for nearly 30 years. Dick died in 2011, and Shirley still lives in the Sacramento bungalow they shared.

WE KEPT OUR DISTANCE — WE WERE THERE BUT SELDOM SEEN. ONLY DURING LUNCH BREAKS DID WE TALK WITH THE WORKERS.

The date is October 11, but there's already snow atop Donner Pass as SP's Al Weise guides one of the last panels being lifted off of a flatcar.

Shirley Burman

In August 1994, 10 years after he and Shirley Burman documented the replacement of Shed 37 between Tunnels 8 and 9, Richard Steinheimer contemplates the abandoned Track 1 from the east portal of Tunnel 6. Today this line, wrested from the mountain at great cost, is a hiking trail.

Shirley Burman

PhotoSpecial

Overland ROUTE 150

OGALLALA, NEBRASKA: The engineer of UP three-cylinder 4-12-2 9019 glances back at the photographer as he eases an eastbound freight up to the mainline coaling stage at Ogallala, 51 miles west of North Platte, in mid-1949. Ahead, the fireman of Extra 3934 West finishes fueling his 4-6-6-4 Challenger.
A. C. Kalmbach

OMAHA, NEBRASKA: In a July 1947 view from the tower at the east end of the Union Station complex in Omaha, a Union Pacific 2-10-2 crosses the Missouri River with freight train 73 out of Council Bluffs. The first bridge here went up in 1872; this is the third, built in 1919 and still in use.

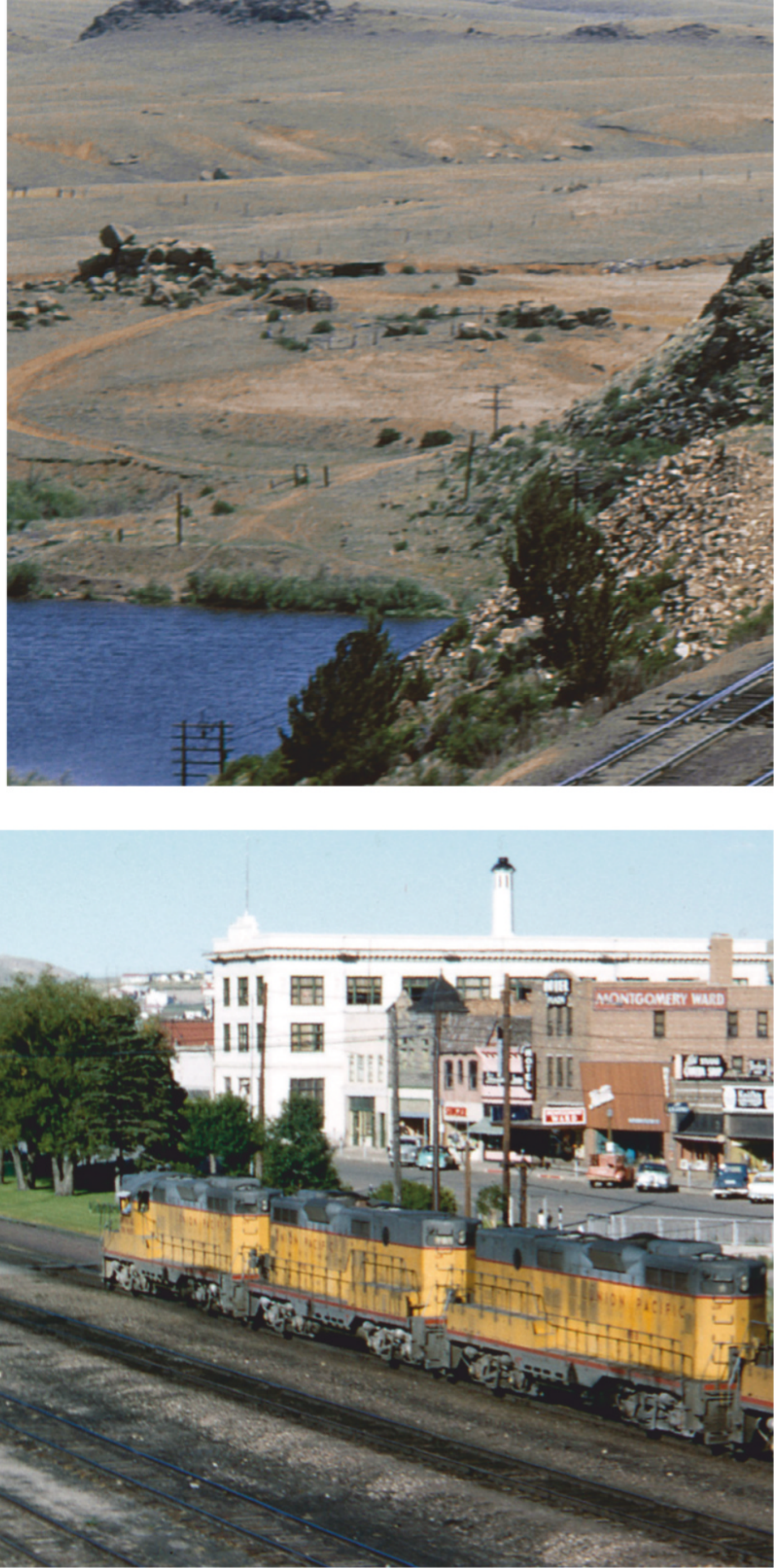
Henry J. McCord

POTTER, NEBRASKA: Extra 1629 East, led by an Alco FA-FB pair, is 16 miles west of Sidney, Nebr., as it curves around the formation known as Point of Rock in August 1955. The tiny town of Potter is visible in the background. Cars dot the Lincoln Highway, UP's companion across Nebraska and Wyoming.

Art Stensvad

DALE JUNCTION, WYOMING: The *City of San Francisco*, having taken UP's double-track main line up the east slope of Sherman Hill, threads the junction with the Harriman Line, opened in 1953 as a low-grade route for westbound freights. The twin tunnels at Hermosa are just ahead, then it's downhill to Laramie. Usually combined with the *City of L.A.* and *Challenger* in this era, train 101 is running solo on this day in mid-1968.

Dan Pope collection



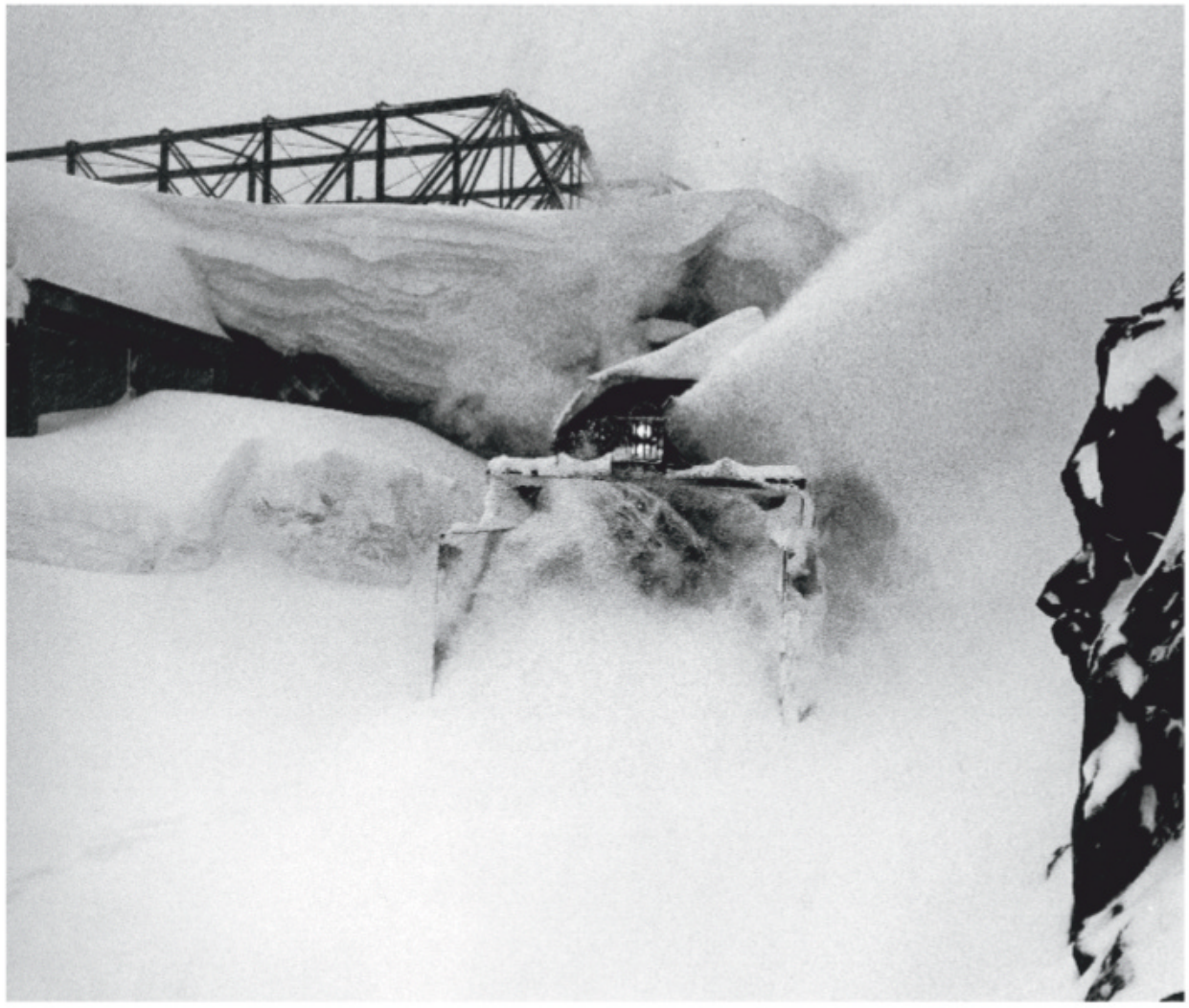
ROCK SPRINGS, WYOMING: Union Pacific bought more cabless road-switchers than any other carrier. The big road's enthusiasm for B units is on view at Rock Springs, Wyo., where a GP9 and three GP9Bs hustle a freight east past the depot and downtown buildings in the 1950s.
Robert A. Caflisch, Helen Caflisch collection

ECHO, UTAH: UP routinely put pushers on freights out of Ogden so they could make decent speed on the long grade via Weber and Echo canyons up to Wahsatch near the Utah-Wyoming line. Challenger 3701 does the honors on October 18, 1956, a few miles east of Echo, where the Park City branch diverged.
Henry R. Griffiths Jr.

MIDLAKE, UTAH: Southern Pacific's 12-mile Lucin Cutoff trestle across the Great Salt Lake was succeeded in 1959 by a causeway 1,500 feet to the north. The old line remained in service for a number of years, and on September 3, 1962, hosted a Pacific Railroad Society special from Los Angeles and Sacramento. As the excursion approached Ogden on the trestle, its passengers got to see a freight headed west on the causeway.
Gordon Glattenberg

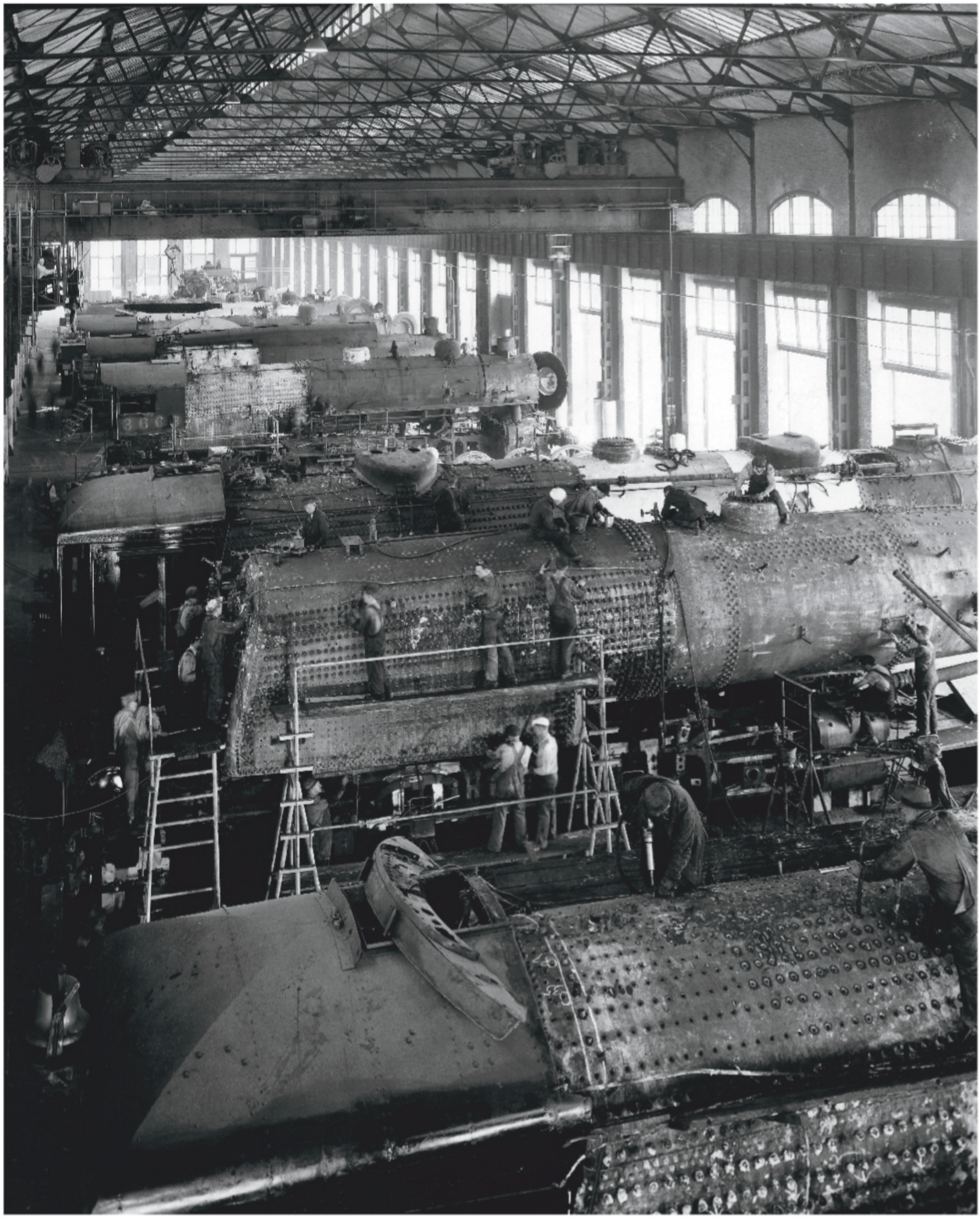
BEOWAWE, NEVADA: SP and UP units lead 124 cars east at lonely Beowawe, 91 miles east of Winnemucca, in July 1976. Western Pacific laid its Salt Lake City–Oakland line parallel to the SP between Wells and Winnemucca in 1909. A 1924 agreement put eastbounds of both roads on WP, westbounds on SP.
Tim Zukas

ANDOVER, CALIFORNIA: On June 9, 1979, passengers in the former SP dome car of Amtrak's westbound *San Francisco Zephyr* have a good view of a smoky SD9 leading a work train following 9 minutes behind. The *SFZ* has just rounded Stanford Curve, a notable feature on the east slope of Donner Pass.
Tim Zukas



NORDEN, CALIFORNIA: A Southern Pacific rotary plow chews through 30 inches of new snow just west of the Donner Pass summit on April 21, 1976. Behind the plow, a winter's worth of the white stuff burdens the covered turntable and other structures. Rotaries came to SP's Sierra Nevada line in 1888.
Dick Dorn

SPARKS, NEVADA: Southern Pacific SD7 1416 idles away the night hours at Sparks in December 1974. The division point 3 miles east of Reno was established in 1902 as part of an 84-mile line change to the east, one of the many improvements to the old Central Pacific during UP's 1902–13 control of SP.
Ted Benson



SACRAMENTO, CALIFORNIA: Set up in 1868, five years after work began nearby on the Central Pacific, the great shops at Sacramento (pictured in the late 1940s hosting big SP power) built or rebuilt hundreds of steam and diesel locomotives and thousands of cars before closure in 1990. For generations it was the largest railroad shop complex west of Chicago. The California State Railroad Museum has long sought to expand into the remaining buildings.
Classic Trains collection

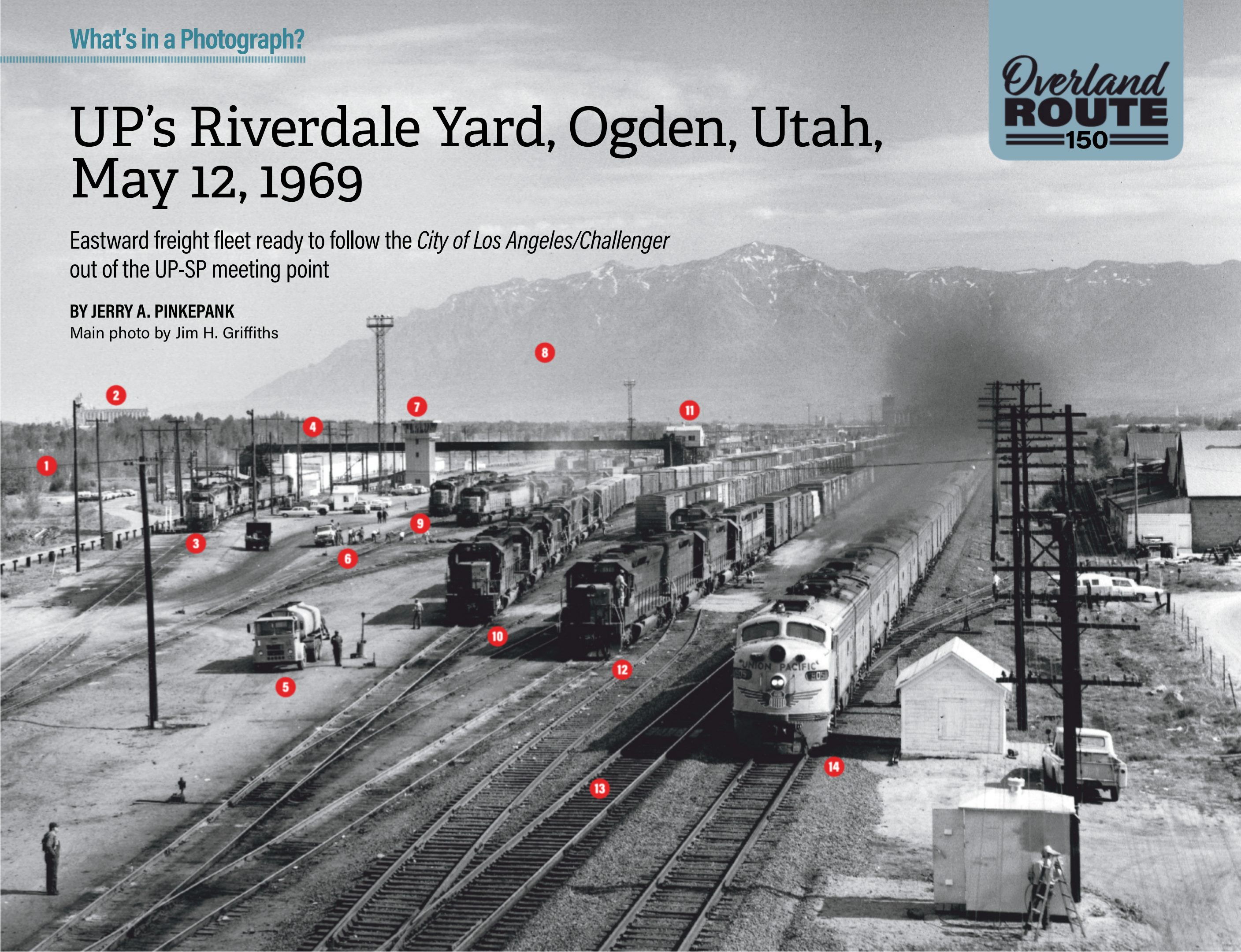
ROSEVILLE, CALIFORNIA: Sometime in the late '30s, 13 cab-forward 4-8-8-2s look out from the roundhouse at Roseville, junction of the Overland Route with a line to Oregon and site of a major freight yard. A response to Donner's snowsheds, cab-forwards came to SP in 1909; the road had more than 250.
Southern Pacific

OAKLAND, CALIFORNIA: An Alco PA-PB-PA trio brings the *City of San Francisco* into SP's Oakland pier terminal in about 1953; most passengers will complete their journey by taking a ferry across the bay. Overland Route trains reached Oakland via Altamont Pass before the 1879 completion of the California Pacific route through Davis and Berkeley; entire train consists were ferried across Carquinez Strait until SP built its big bridge at Martinez in 1930.
Alden Armstrong

UP's Riverdale Yard, Ogden, Utah, May 12, 1969

Eastward freight fleet ready to follow the *City of Los Angeles/Challenger* out of the UP-SP meeting point

BY JERRY A. PINKEPANK
Main photo by Jim H. Griffiths



Ogden, Utah, is named for Union Pacific's first president, William B. Ogden (see his biography in January 2019 TRAINS). Located 36 miles north of Salt Lake City, Ogden was the logical crew terminal in the Salt Lake valley when the UP was building west to meet the Central Pacific. The Mormons had contributed to building the UP through Utah, but the main line missed their principal settlement because it needed to swing north of the lake, where it met the CP at Promontory on May 10, 1869 (a branch to Salt Lake opened in January 1870). This photo was made two days after the centennial of the Golden Spike ceremony. Ogden became the passenger interchange terminal between UP and CP in January 1870, but freight interchange continued at Promontory until CP, which Southern Pacific leased in 1885, opened the Lucin (LU-sin) Cutoff trestle across the lake in 1904. The volume of freight traffic between SP and UP overwhelmed the old joint Ogden Union Railroad & Depot yard, and East Yard, later called Riverdale Yard was opened in 1942, leaving the OUR&D facility, renamed West Yard, for westbound freights.

1 Weber (WEE-bur) River
The river, for which Ogden's Riverdale neighborhood and Riverdale Yard are named, provided the water gap through the Wasatch (WAW-satch) Mountains by which UP entered the Salt Lake valley. Its course turns briefly north here.

2 Sperry Flour elevator
A landmark located across the tracks from UP shops and roundhouse, 1 mile from Union Station.

3 Parking for light engines
UP's Ogden engine terminal was at the old 1927 roundhouse adjacent to West Yard. It wasn't replaced by a modern facility because UP's Salt Lake City shops were so close, so engines laying over that didn't need servicing, such as on trains from L.A. that had changed power at Salt Lake, waited here while their trains were filled out.

4 Ice conveyor
Running from the ice-storage house largely hidden from view, it makes a right-angle turn here to cross tracks and reach the car-icing platform.

5 Fuel truck
Used to top-off fuel tanks on power passing through. Second-generation diesels on Western roads had big fuel tanks to cut the need for this.

6 Section gang replacing ties
Such work in yards often is done by hand without the kind of machinery used on main lines.

7 Yard office tower
In theory with modern computer displays, the yardmaster should not need to look out over the yard from such a perch, but the practice of providing such a vantage point continues today.

8 Spur of Wasatch Mountains
Eastward views at Ogden and Salt Lake City have the dramatic main range of the Wasatches as backdrop, but this spur is seen when looking north at Ogden. The spur determined the location of Ogden by forcing the UP to come close to the lake before turning north to go around it.

9 Parked power consist
Parked next to two eastbounds, one with UP and SP power. Such mixed consists generally would run between yards at Roseville, Calif., and North Platte, Nebr. SP and UP began pooling power through Ogden in 1962, but it didn't become routine until second-generation power took over. Roseville–Ogden is 676 miles and Ogden–North Platte is 709 miles, 1,385 total. UP had a mainline fueling facility at Sinclair (beside the Sinclair Oil refinery), 227 miles east of Ogden, and SP had one at Carlin, Nev., 249 miles west, so it was practical to run through Ogden without refueling.

10 Probable "R Block" train
Stopped beside the icing platform, where these trains were normally yarded. Some of the units (four SD40s, two SD45s) appear to be SP, so this is not a UP train out of L.A. The head block consists of 12 mechanical refrigerator cars, followed by 4 or 5 ice-cooled reefers; mechanical reefers totally displaced ice cars in 1972. R Block trains had traditionally been solid reefer trains that often ran in sections; this one has more non-reefer cars than reefers, reflecting the loss of much perishable traffic to trucks. Except for perishables, the loaded direction on SP between Ogden and the Bay Area was westbound in this era, so the six units may reflect a power-balancing move.

11 Ice dock head house
Until 1954 the icing of R Blocks had been done in the West Yard, but in that year Pacific Fruit Express, the joint refrigerator car operating subsidiary of UP and SP, constructed a new ice plant and storage house referred to in item 4, as well as the conveyor and a 110-car icing platform. Ice cakes from the ice house were placed in carts which workers distributed along the dock to dump into the reefers' bunkers. There was also a provision to blow chipped ice into the body of the car through an open side door — PFE personnel were on the ground to do this in addition to the men on the dock, and it was called "top icing." As mechanical reefers came into service, the ground men took care of checking and topping off fuel of their diesel engines and confirming the temperature was being maintained. Mechanical reefers can reliably protect frozen shipments, which was hard to do with ice cars. The ice dock was razed in 1974.

12 Probable OVE ("Overland East")
OVEs often ran in sections and among other traffic handled hot empty auto parts cars returning from Ford and Chevrolet plans in the Bay Area; these cars had special racks for particular parts such as engines and were needed back at auto plants to keep the cycle going, often as loads being tagged as "shut down cars" if they were late and threatening the continuity of the assembly line. The first three units are SP followed by a UP DD35. The OVE was scheduled into Ogden at 8 a.m. and out at 11 a.m.

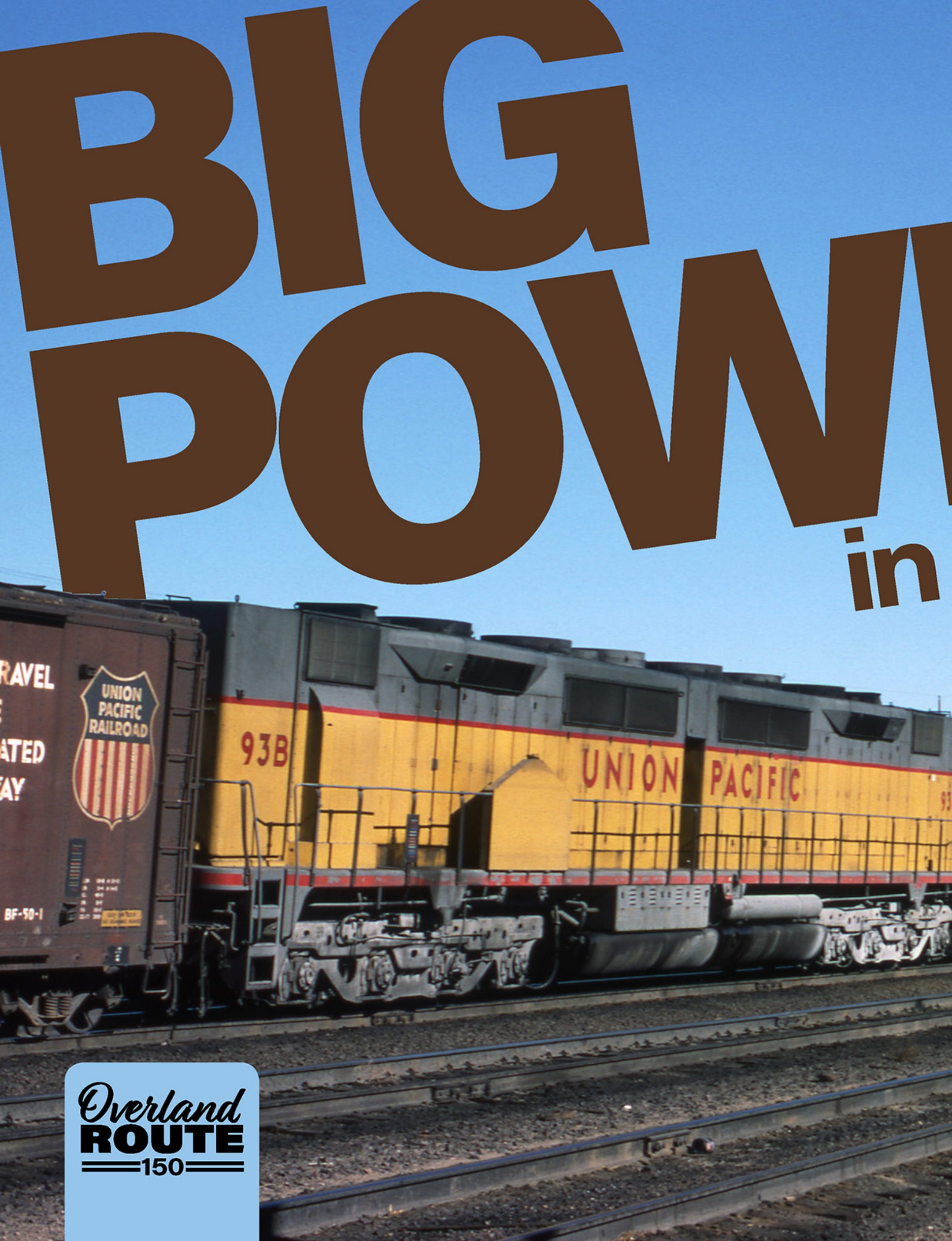
13 Westbound main track
UP's main line to the east through Weber Canyon is arranged for left-hand running.

14 Train 104
The eastbound *City of Los Angeles*, combined with the L.A. section of the *Challenger*. Due to depart Ogden at 9:05 a.m., it was followed by the *City of San Francisco* at 9:34.

SP train 21 to Oakland, all mail and express plus a coach or two, departs Ogden Union Station on June 7, 1967. Nos. 21-22 came off a few months later, victims of the 1967 Post Office cutbacks.
Gordon Glattenberg

BIG POW

in



Overland ROUTE 150

ER the West

After the steam era, UP and SP continued the tradition of massive, distinctive locomotives with turbines, double diesels, and diesel-hydraulics

BY A. J. WOLFF

Big power dominates on the Overland Route: Three EMD DDA40Xs and a DD35 lead an eastbound freight into Cheyenne, Wyo., in February 1976. It would take eight conventional locomotives to give the same power.
A. J. Wolff

Gas turbine-electrics

In the steam era, Union Pacific was a proponent of large, powerful locomotives to move tonnage at high speed over significant grades. The most notable examples of this approach were 88 4-12-2 Union Pacific types (introduced in 1926), 105 4-6-6-4 Challengers (1936), and 25 4-8-8-4 Big Boys (1941). Although UP began to use diesels on passenger trains as early as 1934, it believed steam would be the preferred choice for freight for years to come. However, prior to 1940, it began exploring alternate forms of motive power.

UP flirted with the concept of turbine-electric locomotives in 1939, when it tested two General Electric-built steam turbines, Nos. 1 and 2, for two months. The units were never owned by UP and were returned to GE in June 1939.

In late 1948, Alco-GE built a 4,500 h.p. gas turbine-electric locomotive (GTEL), No. 101. The dual-cab, 84-foot, B+B-B+B unit burned the then-plentiful and relatively cheap Bunker C fuel that commonly powered oil-burning steam locomotives. The turbine was coupled to a D.C. generator through reduction gears, and the resultant electrical energy was transmitted to eight traction motors. After tests on eastern roads, the unit was painted in UP colors and renumbered to 50 in June 1949. It operated for 21 months to Los Angeles; Portland, Ore.; Seattle; Denver; and Kansas City in all types of service. However, the majority of runs took place over the Wyoming Division from Cheyenne to Ogden. Impressed with the prototype, UP went on to order three groups of gas-turbine-electrics from GE; the road's 55 units constituted North America's only major turbine fleet.

Later, UP experimented with a coal-burning steam-turbine-electric, which it tested from 1962 to '64. Built from a former PA cab unit, a Great Northern electric, and a fuel tender, it was scrapped in 1968.

MODEL	UNITS	BUILT	H.P.	TRUCKS	LENGTH	WEIGHT
GTEL 4500	UP Nos. 51–60	1/52 to 8/53	4,500	B+B-B+B	84 feet	276 tons
GTEL 4500	UP Nos. 61–75	3/54 to 10/54	4,500	B+B-B+B	84 feet	276 tons
GTEL 8500	UP Nos. 1–30	8/58 to 6/61	8,500	C-C (two)	179 feet*	592 tons*

** Figures include tenders*

General Electric GTEL 4500 ("standard")

Union Pacific accepted its first production-model turbine, No. 51, in January 1952. It was initially assigned between Green River and Ogden, to power 5,000-ton freights up the 1.14 percent eastbound grade to the summit at Wahsatch, Utah, and 5,600-ton trains on the westbound 0.82 percent grade from Evanston, Wyo. (Once in service, turbine-powered eastbounds often required help from steam pushers.)

As delivered, the unit had a single cab with air intakes on the sides, a characteristic shared with the next five, Nos. 52–56. The balance of the group, Nos. 57–60, had rooftop air intakes. The first six were similarly modified to address air circulation problems.

Nos. 51–60 came to be called "standard turbines" in recognition of their full-width body similar to a diesel cab unit. The main tank held 7,200 gallons of bunker C fuel oil. To operate the locomotives with the turbine shut down or to start the turbine, they were equipped with a 250 h.p. Cummins diesel engine.

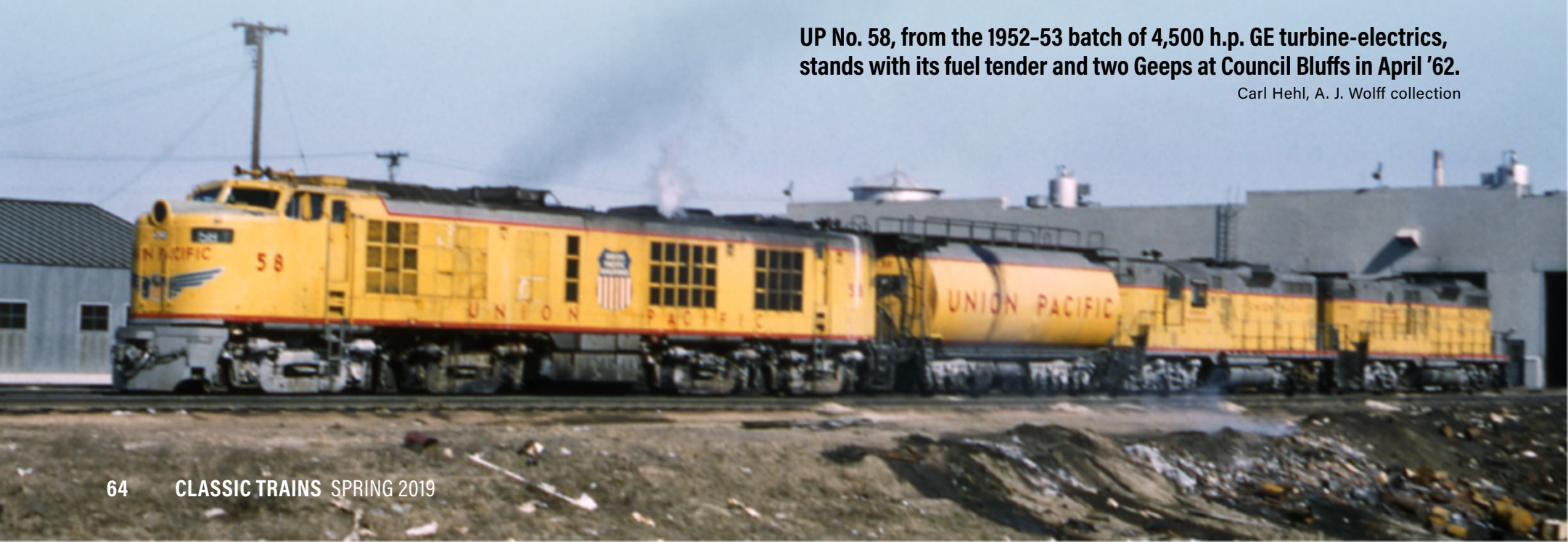
Fuel tenders holding 22,000 gallons and fabricated from tenders off retired 4-12-2s were added in 1956, enabling the turbines to expand their territory beyond Ogden–Green River. With a tender, they could run Council Bluffs–Ogden, almost 1,000 miles, without refueling.

No. 57 was converted to burn propane in May 1953. It tested between Las Vegas and Los Angeles, but fuel costs and safety concerns offset any advantages. It was converted back to fuel oil in early 1954.

A double turbine combination with Nos. 59 and 60 back to back, spliced by a common fuel tender, was tried in late 1958. The trial was discontinued due to air intake problems on the trailing unit.

To increase the horsepower at the pulling face, Nos. 55 and 58–60 were modified in 1958–59 to enable them to operate in multiple with diesels. The standard turbines made several trips to L.A. in 1962, but otherwise their normal operating territory was Council Bluffs to Ogden.

Because of increased maintenance costs, Nos. 51–57 were retired by the end of 1962. No. 60 was dropped from the roster in August 1963 and Nos. 58–59 followed in June 1964. Trucks and other usable parts went to GE for reuse in U25B and U50 diesels. The bodies were subsequently scrapped in Omaha and Cheyenne.



UP No. 58, from the 1952–53 batch of 4,500 h.p. GE turbine-electrics, stands with its fuel tender and two Geeps at Council Bluffs in April '62.
Carl Hehl, A. J. Wolff collection

Turbine No. 64, one of the 15 "veranda" units, and 4-8-4 No. 826 hustle a fruit block east out of Green River, Wyo., in September 1958.
Henry R. Griffiths Jr.

General Electric GTEL 4500 ("veranda")

Seven months after the delivery of the final "standard" turbine, No. 60, the next group of 15 began to arrive. They incorporated a number of improvements over the previous version, the most noticeable change being the addition of walkways along the unit body to enable easier access to internal components. Since these walkways were sheltered below the roof line, they gave the appearance of residential verandas, as the class was eventually dubbed. In addition, the air intakes were moved to the roof in lieu of side intakes. Like Nos. 51–60, the veranda-style units had a 250 h.p. Cummins diesel engine for yard movements and starting the turbine. To heat the 7,200 gallons of viscous bunker C fuel oil, Nos. 61–75 were equipped with Vapor Clarkson boilers as were the earlier "standard" GTELs.

As built, the veranda units lacked tenders. No. 61 was the first turbine to receive a tender (from 4-8-4 806), which occurred in October 1955. The balance of the veranda turbines, like the earlier standard group, were equipped with tenders fabricated from 4-12-2 tenders that enabled operation across UP's Eastern District, all the way from Council Bluffs to Ogden. In 1958, No. 61 was modified for multiple-unit operation with diesel locomotives, which proved successful. Eventually, all but 6 of the 25 4,500 h.p. turbines were so equipped.

Like the standard turbines, the verandas' usual operating territory was between Council Bluffs and Ogden. For evaluation beyond the Overland Route, No. 61 with a pair of GP9s made two trips to Los Angeles in late 1958 while No. 67 made two trips to Kansas City from North Platte.

The first of the verandas was retired in August 1963. Nos. 67 and 68 were the last to be dropped from the roster, lasting until June 1964.

Twelve of the verandas surrendered their B+B truck and bolster assemblies to GE for use under new U50 double diesels [see page 68]. The remaining three had their truck assemblies sent to Alco to equip the forthcoming C855s [see page 69].

Locomotives 71 and 75 had the shortest service lives at nine years. None of the standard or veranda-style turbines survive in preservation.

General Electric GTEL 8500

In the quest for more horsepower to enable even greater speeds across the system, UP in 1955 again approached General Electric for a new generation of turbines. Rated initially at 8,500 h.p., they would later be modified to a gross output of 10,000 h.p.

After a nearly three-year period of development, GE in August 1958 released the first of what would be a fleet of 30 locomotives. It consisted of a control cab semi-permanently coupled to a 63-foot B unit that housed an 8,500 h.p. turbine. A 24,000-gallon fuel tender, from retired class FEF-1 4-8-4s and 3800-series Challengers, was part of the design from the start. Unlike the 4,500 h.p. GTELs, the heavy fuel oil was heated by electric coils in the body of the tender. Under full load, the big turbines consumed 800 gallons of fuel per hour.

The cab unit housed a six-cylinder, 850 h.p. Cooper Bessemer diesel that provided the means for yard movement with the main turbine shut down and was also used to start the turbine. In addition, it housed the air compressors and dynamic brake resistors. The B unit contained a single-shaft, 10-combustion-chamber gas turbine coupled to two 3,500 h.p. generators to provide 7,000 h.p. to the rail.

The delivery of the last turbines occurred in June 1961. They were assigned to run from Council Bluffs to Ogden, although the type made trips to Los Angeles in mid-1962. All but five could operate in multiple with diesels.

Like the smaller 4,500 h.p. turbines, their reign on the UP was relatively short. They were hampered by rising fuel costs and maintenance issues with fuel pumps, nozzles, and turbine blade corrosion. The big GTELs were sidelined when fuel and maintenance expenses exceeded those of diesels in comparable service. The first four were retired in August 1968, and just 13 remained on the roster by December 1969. Several were stored as early as mid-1966. No. 7 had the honor of making the last turbine run on December 26, 1969, from Cheyenne to North Platte.

The railroad traded 20 to GE with their six-motor trucks to be utilized under new U50C diesels [page 71]. The balance went to various dealers and were scrapped. Two are preserved, No. 18 at Illinois Railway Museum at Union, Ill., and No. 26 at the Utah State Railroad Museum in Ogden.

Turbine No. 1 rests at Council Bluffs in September 1960. The giant locomotive, including tender, stretched 179 feet and weighed 592 tons.

Carl Hehl, A. J. Wolff collection

This undated public-relations photo showcases UP 8,500 h.p. turbine No. 13. The A unit housed auxiliaries; the turbine was in the B unit.

Union Pacific

Double-engine diesel-electrics

In the early 1960s, Union Pacific determined that 15,000 h.p. was the optimum needed to move freight trains at speeds required to remain competitive with other railroads and trucks, particularly on the main line between Council Bluffs, Ogden, and Los Angeles.

At the time, such a horsepower requirement could be attained with the combination of six 2,400–2,500 h.p. diesel-electrics or an 8,500 h.p. turbine in multiple with three diesels. In words of President E. H. Bailey, that was just "too many go-carts."

After 1962, UP ceased the use of the turbines west of Ogden because of noise and environmental issues in California. That led the railroad to seek proposals from the three diesel locomotive builders — EMD, GE, and Alco — to design and build a three-unit set that developed 15,000 h.p.

EMD was the first to respond. It built two B units, designated model DD35, each fitted with two 2,500 h.p., 16-cylinder, 567D3A engines. They rode on four-axle Flexicoil trucks with D67 traction motors. To reach the 15,000 h.p. that the UP wanted, the two B units were paired with two GP35s. However, that produced a set of four units, not three as UP desired. A GP35-DD35-DD35-GP35 demonstrator set painted red and white toured the nation in 1963–64.

GE and Alco soon fielded their own double-engine, eight-axle, 5,000 h.p. diesel-electrics. Only EMD and GE received quantity orders for double diesels, and both fielded follow-on models after their 1963 offerings. UP eventually amassed a fleet of 155 twin-engine diesel-electrics; Overland Route partner Southern Pacific sampled a total of 6. No other North American roads bought such units.

MODEL	UNITS	BUILT	H.P.	TRUCKS	LENGTH	WEIGHT
EMD DD35	UP Nos. 72B–98B, SP Nos. 8400–8402	9/63 to 9/64	5,000	D-D	87 feet	260 tons
EMD DD35A	UP Nos. 70–84	4/65 to 6/65	5,000	D-D	88 feet	261 tons
GE U50	UP Nos. 31–53, SP Nos. 9550–9552	10/63 to 8/65	5,000	B+B-B+B	83 feet	279 tons
Alco C855	UP Nos. 60, 60B, 61	7/64	5,500	B+B-B+B	86 feet	275–276 tons
EMD DDA40X	UP Nos. 6900–6946	4/69 to 9/71	6,600	D-D	98 feet	273 tons
GE U50C	UP Nos. 5000–5039	10/69 to 11/71	5,000	C-C	79 feet	221 tons

Electro-Motive DD35

Union Pacific acquired 25 new DD35s in 1964 and also took the 2 EMD demonstrators, Nos. 5653 and 5655. It also purchased 22 GP35s to build the desired 15,000 h.p. package.

Because of the proximity of the sandboxes to the electrical cabinets, problems developed as grit began to foul the electrical components and compounded reliability problems. Three of the DD35s, UP 91B, 93B, and 98B, had new cabinets fabricated at the rear of the carbodies (98B had two, front and rear). A less expensive alternative to alleviate that problem involved the mounting of triangular-shaped sandboxes outside of the handrails near the middle of the engine compartments on both sides, well away from the electrical cabinets. Photographic evidence suggests that at least 19 of the DD35s were so equipped around 1974–75. The project may have been halted before the fleet was competed as the units approached retirement.

With the arrival of large numbers of EMD SD40-2s and GE C30-7s, the units entered storage during 1975–78 and were retired and sold for scrap beginning in June 1979.

Of note, the DD35s were last B units ordered by UP.

Southern Pacific was impressed enough with the EMD demo set that it ordered 172 GP35s, but only three DD35s. Initially, the DD35s were paired with GP35s on the Sunset Route out of Los Angeles. By 1977 they were used on transfer moves between Taylor Yard in L.A. and West Colton.

SP found the DD35s too bulky and unwieldy, and retired them in December 1978.

SP 8401 shows the DD35's square ends and four-axle trucks. All EMD DD models had a passageway between the engine compartments.

Classic Trains collection

A GP35-DD35-DD35-GP35 consist, as intended by builder EMD. The third unit, No. 73B, is a former demonstrator.

Classic Trains collection

UP DD35A No. 83 leads a westbound train out of Cheyenne, Wyo., in October 1978 with three SD40-2s producing a total of 14,000 horsepower.

A. J. Wolff

Electro-Motive DD35A

Seven months after the last DD35 was built, UP accepted delivery of the first DD35A: a cab-equipped version of the big B unit. To accommodate the addition of a cab and maintain the same frame length as the DD35s, the radiators for both engines were flared out and abutted one another.

With the arrival of the DD35As, UP now had the means to build a three-unit EMD set that developed the desired 15,000 h.p. that management had envisioned at the beginning of the decade. Various combinations of DD35As and DD35s were fairly common during their 14 years of operation on the UP, but they were widely used in concert with other power including GEs, Alcos, and turbines.

Like the DD35s, the A units received outboard-mounted sandboxes relocated away from the electrical cabinets to alleviate dust and grime problems. However, the DD35As were only outfitted with two of the triangular shaped boxes placed adjacent to, and outside of, the handrails near the middle of the rear engine compartment on both sides of the unit. That application began in 1975 and photographic evidence indicates that all but No. 80 were so equipped.

In another modification, Nos. 82 and 82B were equipped with roof-mounted antennas in May 1968 to accommodate Remote Radio Control System operation. UP initiated a similar program for a portion of its SD45 fleet at the same time. The radio control gear was removed in 1973.

Again, like the DD35s, with the arrival of new units, the A units saw periods of storage beginning in 1977. Formal retirement and scrapping came during 1979–81. No DD35s or DD35As are preserved.

General Electric U50

General Electric responded to UP's three-unit, 15,000 h.p. proposal by delivering three U50 locomotives, Nos. 31–33, in October 1963. Each was powered by two 16-cylinder, 2,500 h.p. 7FDL-16 engines, the same installed in the more conventional U25B. The U50's B-B+B-B running gear came from retired 4,500 h.p. gas turbines.

The engines were mounted in the carbody such that one radiator was at the rear of the unit, the other just behind the cab. A large cooling fan supported by a vertical shaft was visible below the radiators mounted under the roof line; the appearance of those rotating fans gave rise to the moniker "whirlybirds" for the U50s. Large "squirrel cage" type equipment blowers were also visible within the screened compartments below the radiators. The generators were mounted back-to-back in the middle of the unit. The high-mounted cab had no nose door, so crews entered the cab on each side from the walkways.

Since these double-diesel units constituted a new, untested design, an agreement was reached that orders for additional U50s could be canceled and replaced with U25Bs if UP was not satisfied. Initially pleased with the U50, UP placed an order for 20 additional units, delivered between July 1964 and August 1965.

U50 No. 31 towers over a U25B on a test run at Omaha in October 1963.

Lou Schmitz, A. J. Wolff collection

A railroad proposal to upgrade the U50s to 5,600 h.p.

Alco C855

Because of developmental issues, Alco was the last builder to respond to UP's proposal for a three-unit locomotive producing 15,000 h.p., with the delivery of an A-B-A combination of its new C855 model in July 1964. The "C" denoted Alco's Century series, which the builder had launched the year before; "8" stood for the number of powered axles; and "55" was the horsepower in hundreds.

Each unit sported a pair of 2,750 h.p., 16-cylinder 251C prime movers producing a total of 5,500 h.p. per locomotive. Thus, the three-unit set was rated at 16,500 h.p., which Alco proudly proclaimed to be the most powerful diesel locomotives ever built. As with GE's U50, the C855 rode on four trucks in a B+B-B+B arrangement from retired 4,500 h.p. GE turbines.

In an arrangement different from the U50s (but shared with EMD's DD units), the radiators were located in the middle of the carbody with one generator located at the rear of the unit and the other behind the cab.

There were electrical problems at the outset on their first trip west out of Council Bluffs, owing to Alco's rush to complete the units. This was just the beginning of the maintenance issues that plagued the big Centurys during their short tenure.

Normal operating territory was from Council Bluffs to Ogden. They were not seen west of North Platte after 1968 and ended their careers in eastern Nebraska and Kansas.

Alco C855 No. 61 rests at the diesel pad at Council Bluffs, Iowa, in September 1966 with a mate. When run as intended in a three-unit set, they produced 16,500 h.p., more than any other double-diesel offering.

Carl Hehl, A. J. Wolff collection

The sole C855B unit, No. 60B, rests at Council Bluffs between runs in July 1967. Four sand boxes hang from the frame outside the handrails.

Carl Hehl, A. J. Wolff collection

with the substitution of 2,800 h.p. engines in 1969 was rejected by GE as the 5,000 h.p., six-axle U50C was already under development at the time.

When delivered, the U50s primarily operated between North Platte and Ogden. They later worked from North Platte to Kansas City. Reliability problems began to sideline the units beginning in 1973 with the retirement of No. 33. The rest were dropped from the roster by April 1977. All but three were traded to GE for U30Cs; Nos. 45, 51, and 53 were sold for scrap.

Southern Pacific sampled GE's entry into the double-diesel market by accepting delivery of three U50s in 1964. Like its three EMD DD35s, they were based out of Los Angeles and initially ran on the Sunset Route. Later they were used in heavy transfer service. Maintenance issues with their GE FDL engines and their minority status on the roster led to an early retirement in 1978.

SP U50 9952, one of three on the roster, rests with an SP DD35 at a Long Beach, Calif., scrapyard in 1978.

Leon Callaway

Electro-Motive DDA40X "Centennial"

In 1968, Union Pacific purchased 50 20-cylinder, 3,600 h.p. EMD SD45s for high-speed service. However, the units did not meet management's expectations in that role. So, UP commissioned EMD to design and build a locomotive that would develop more horsepower than the DD35, U50, or C855 models. The result was the largest double-diesel locomotive ever produced, the DDA40X.

The first one built, No. 6900, was completed just in time to participate in ceremonies commemorating the 100th anniversary of the driving of the Golden Spike in Utah on May 10, 1969. To honor that event, the class was dubbed "Centennials."

The locomotives were powered by two 16-cylinder, 3,300 h.p., 645E3A engines arranged in the same fashion as the DD35As — one alternator near the rear of the carbody and the other behind the cab. (Alternators replaced generators beginning in 1965–66.)

The radiators flared out at the middle of the unit with an open passageway between the engine compartments, again like the DD35As. The unit rode on two, four-axle Flexicoil trucks, and all axles were geared to D-77X traction motors. The cab was similar to that on EMD's F45 and FP45 and had a small nose door.

The "X" in the model designation was to indicate a number of experimental features, notably new modular electronics that would appear in the upcoming Dash 2 series models. The new components made maintenance and trouble-shooting easier. The DDA40Xs also had a self-loading feature that enabled them to be tested independent of an external load box.

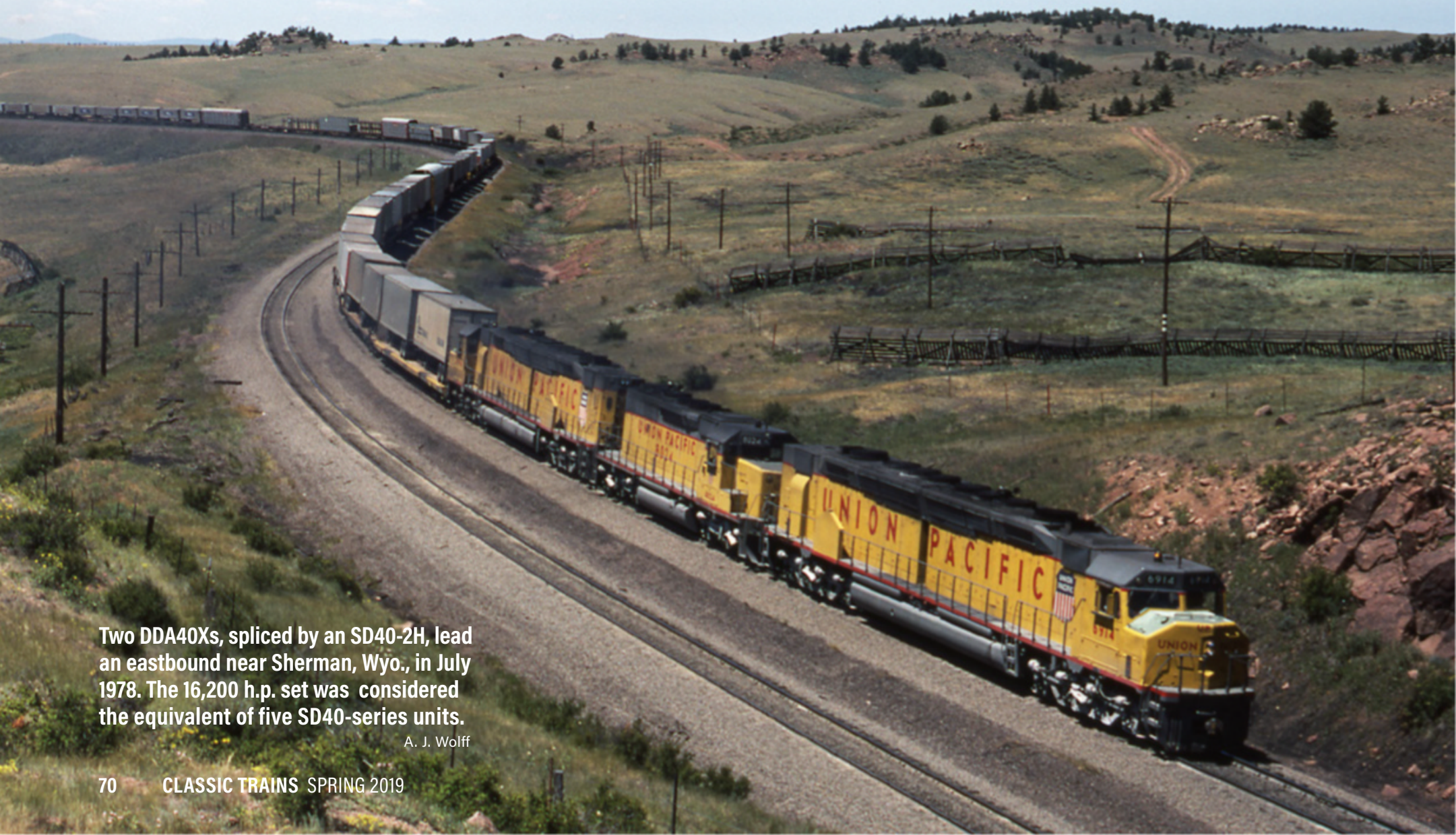
Delivery dates were staggered over a two-year period. The last unit, No. 6946, was delivered in September 1971.

By the mid-1970s, the Centennials had each accumulated more than a million miles of service. To improve their reliability, UP initiated a "fail safe" program in 1976, which was completed the next year. The apex of DDA40X operation was during 1976–79 when they were paired with one or two 8000-series SD40-2H "Fast 40s" on priority freights across the system. With increasing maintenance costs and coupled with a nationwide economic recession, all were in storage by August 1980.

An upturn in business in late 1983 and a shortage of power saw 25 returned to service in February 1984; the others were unserviceable and stripped for parts. All 25 were again stored by December 1984, but 14 saw limited service in early 1985. The last regular run of a DDA40X occurred May 5-6, 1985, on a Los Angeles to Chicago run, with No. 6936 and SD40-2 3680 as the lead power.

Of the 47 Centennials, two were wrecked and scrapped, Nos. 6903 and 6921, but an amazing 13 are preserved — nearly 28 percent of the fleet! No. 6936 is still on the UP roster in its heritage fleet, but has not operated for a number of years.

Centennial 6905 rests at Cheyenne in near-perfect light in late 1970.
A. J. Wolff



Two DDA40Xs, spliced by an SD40-2H, lead an eastbound near Sherman, Wyo., in July 1978. The 16,200 h.p. set was considered the equivalent of five SD40-series units.
A. J. Wolff

U50C No. 5028 rides on the Cheyenne turntable in March 1972. Its three-axle trucks came from retired 8,500 h.p. turbines. The U50Cs were the second most numerous, least successful double diesel-electrics.

A. J. Wolff

General Electric U50C

Union Pacific management was still committed to the concept of double-diesel power in the late 1960s despite the arrival of new conventional C-C units from all three builders beginning in 1966.

The next step in the development and improvement of double-diesel power was first manifested with the design and construction of the EMD DDA40X "Centennials." GE's response to this evolution was the U50C, initially released in October 1969, five months after the first Centennial. Since Alco was no longer producing domestic locomotives after January 1969, it had no offering to supersede the poor-performing C855s.

The U50Cs were powered by two 12-cylinder, 2,500 h.p., 7FDL-12 engines, placed with radiators in the middle of the carbody and alternators on opposite ends of the prime movers. The units rode on three-axle trucks from retired GTEL 8500 turbines, and the axles were geared to GE 752 traction motors. The U50Cs had the distinction of being the heaviest C-C units ever constructed: 221 tons. The first 12 units had no nose doors as delivered, but were modified by UP in 1972–73; the others had nose doors installed when built.

The U50C's short tenure on the UP was marred by a series of mechanical and electrical problems. Aluminum wiring caught fire, and their tremendous weight caused stress fractures within the frame and on the recycled turbine trucks. One unit was sent to Morrison-Knudsen in Boise, Idaho, to replace the aluminum wiring with copper. The upgrade eliminated the fire problem, but such work was deemed too expensive to convert the rest of the fleet. Also, some crews complained of a rough ride, and there were concerns that the short nose provided little protection in the event of grade-crossing accidents. Crews at Cheyenne derisively referred to them as "suicide units."

During the recession of 1974–75, they were among the first power to be stored. In 1976, a few had their radios and cab roof warning lights removed and were used as trailing booster units. That downgrade did not save the U50Cs, however, and all were out of service by the end 1976. They were all formally retired through February 1978 and later sold for scrap. However, four were briefly used at two Ford Motor Co. factories as stationary power plants in March 1978.

Although General Electric offered the U50C in its catalog, no other railroads expressed interest. With the retirement of UP motive-power boss D. S. Neuhart in 1970, Frank D. Accord was appointed as the Motive Power & Machinery department's superintendent. He preferred to buy standard, off-the-shelf models — EMD SD40-2s and GE C30-7s — in part for maximum flexibility for pooling power with connecting railroads, as most roads were reluctant to accept large double diesels for that type of service.

Like the Alco C855s, the U50Cs were poor performers for the UP — none even reached a million miles of service. No. 5007 accumulated mileage of 680,437, the highest of the group.

Diesel-hydraulics

Germany was the early

leader in developing and building diesel locomotives that utilized direct-drive transmissions. Those early models in the 1930s incorporated torque converters and gears in lieu of electric motors geared to the axles, as was the norm in U.S. railroading. There was limited interest in such units in the U.S., although Plymouth and Whitcomb built small industrial direct-drive units from the late 1930s through the mid-1950s. Budd RDC cars represented the most successful and widespread application of hydraulic drives in the country.

In the late 1950s, both Denver & Rio Grande Western and Southern Pacific were interested in finding motive power that developed more power than the 2,400 h.p. models on the market, EMD's SD24s and Alco's RSD15s. Both roads approached Germany's Krauss-Maffei to design such a locomotive that utilized a hydraulic drive, and, as a result, each took delivery of three prototypes in 1961. Designated as ML-4000s, the units had full-width carbodies and high-mounted turret type cabs. Each locomotive had two 2,000 h.p., 16-cylinder, 1,585 rpm Maybach MD 870 engines coupled to Voith transmissions with drive lines geared directly to the axles. The three-axle trucks were of German design and unlike any made in the U.S.

Among the perceived advantages of hydraulic drive locomotives were full tractive effort when starting; no wheelslip under load with no subsequent overheating of the type experienced with traction motors; simplified controls; and easier maintenance. The Rio Grande initially believed that its three ML-4000s in multiple-unit operation, could do the work of eight conventional 1,750 h.p. units.

D&RGW modified the units to improve the intake of fresh air through the road's many tunnels, and it replaced the compressed-air multiple-unit controls with the electrically activated type that enabled them to operate with EMD models.

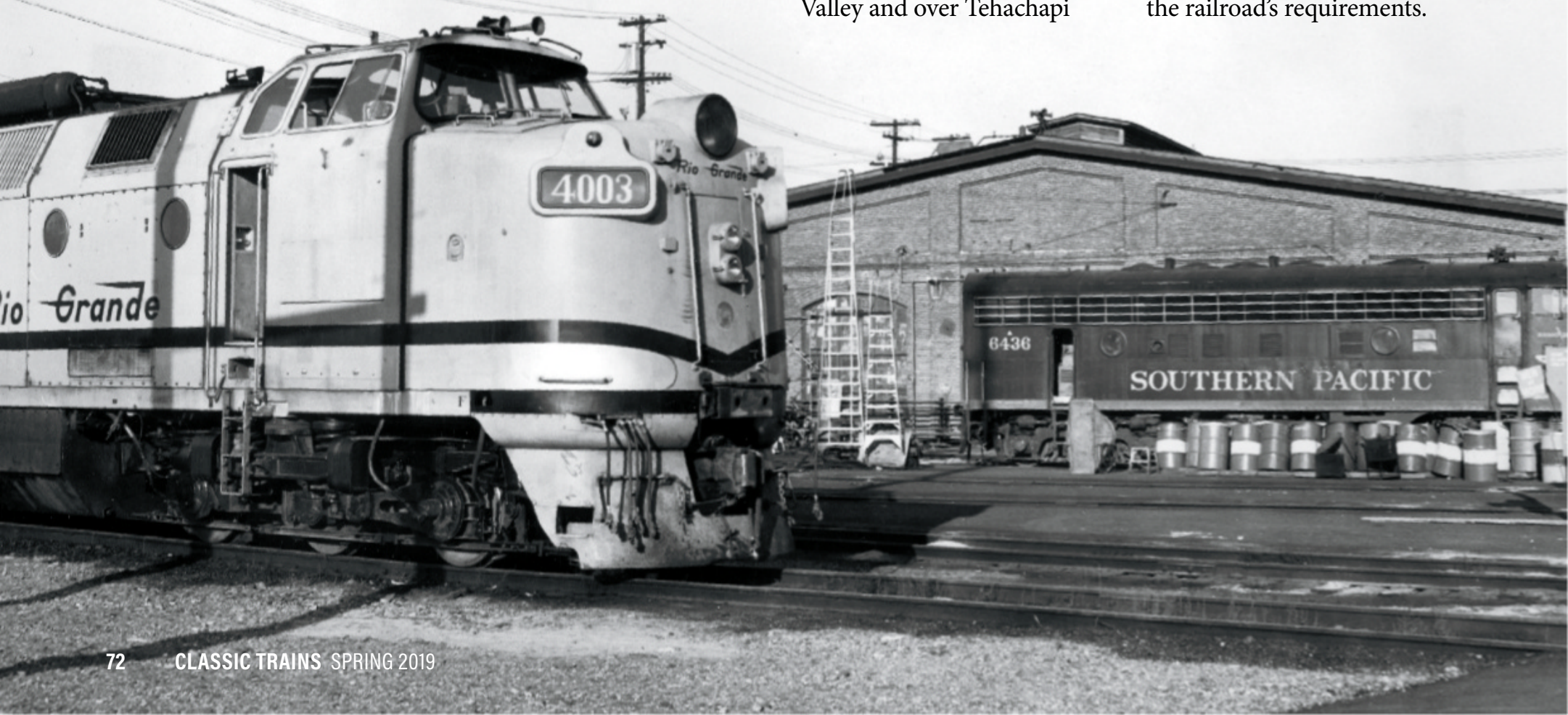
As it turned out, the Krauss-Maffei units required a high level of maintenance and were simply not rugged enough to meet the demands of heavy service over Rio Grande's mountainous territory. Since they were orphans on the roster, and the D&RGW found that they performed no better than the newly arriving GP30s, in February 1964 the road sold all three to the Southern Pacific, which gave the diesel-hydraulic concept a longer, harder look.

MODEL	UNITS	BUILT	H.P.	TRUCKS	LENGTH	WEIGHT
Krauss-Maffei ML-4000 (cowl body)	SP 9000–9002 SP 9021–9023, formerly D&RGW 4001–4003	1961	4,000	C-C	66 feet	165 tons
Krauss-Maffei ML-4000 (hood body)	SP 9003–9017	1963	4,000	C-C	68 feet	177 tons
Alco DH643	SP 9018–9020	9/64	4,300	C-C	76 feet	200 tons

Krauss-Maffei ML-4000 (cowl)

Southern Pacific based the six prototype Krauss-Maffei cowl body units out of Roseville, Calif., where they were first utilized over Donner Pass and later down the San Joaquin Valley and over Tehachapi Pass. Not meeting expectations, all six were scrapped in September 1967. Even before their tenure was over, SP was still interested in diesel hydraulic locomotives with design improvements to meet the railroad's requirements.

Former Rio Grande ML-4000 diesel-hydraulic 4003, built by Krauss-Maffei, rests at Roseville, Calif., on February 8, 1964, waiting to enter service for new owner Southern Pacific.
Don Sims



Krauss-Maffei ML-4000 (hood)

Southern Pacific next wanted a diesel-hydraulic more closely aligned with current U.S. locomotive design practices. In particular, it desired a road-switcher type body with conventional trucks, multiple-unit capability, and a medium-speed prime mover of U.S. design. Another requirement was that the locomotive not require special servicing facilities.

To that end, Krauss-Maffei delivered 15 units in 1963, but they still came equipped with two high-speed 2,000 h.p. Maybach V-16 engines, contrary to SP's design preference. As before, the engines were coupled to Voith direct-drive hydraulic transmissions. The trucks were of standard General Steel Casting design, a type that also appeared on six-axle Alco diesel models. The cab sported side windows that slanted toward the roof and trapezoidal-shaped windshields, unique to U.S. railroading. Taller exhaust vents were also incorporated to minimize air intake issues.

Like their predecessors, the road-switcher hydraulics were assigned to Roseville, Calif., and utilized over similar territories, although four of the type were tested on iron-ore trains over Beaumont Hill in southern California in 1964. Over time, maintenance issues mounted, drive shafts were subject to failure, and the high-speed Maybach engines proved troublesome.

Hood-type hydraulic 9014 lugs a train on the San Joaquin Valley line at Fresno, Calif., in September 1964 with livestock cars at the head end.

Gordon Glattenberg

As a result, all were retired in November 1968. The former No. 9010 was converted to a camera car to film SP's right of way for use in a locomotive simulator for training purposes. It is undergoing restoration by the Pacific Locomotive Association at the Niles Canyon Railway.

Alco DH643

With an eye on SP's desired specifications for a road-switcher that employed a hydraulic transmission, Alco designed and built three DH643 units in 1964. Each had two 2,150 h.p. 12-cylinder 251C engines coupled to German Voith hydraulic transmissions under a license agreement. The prime movers, of the type used in SP's Alco RS32s, faced opposite each other with the radiators in the middle of the carbody and the transmissions below. The drive shafts from the transmissions to the trucks were of a heavier design than those employed in the Krauss-Maffei locomotives. The DH643s rode on a tri-mount truck that had been standard on Alco six-motor units since 1950.

They initially performed well on the SP, and reportedly, they could haul twice the tonnage of a diesel-electric with the equivalent horsepower. Like the Krauss-Maffei units, the DH643s were based out of Roseville and primarily used on San Joaquin Valley runs. They were frequently paired with at least one F7. Maintenance issues took their toll on the Alcos. In particular, there were instances when brass flakes were noted in the truck gear boxes, necessitating costly repairs.

No additional DH643s were ordered, and no other road expressed any interest. Orphans on the SP roster, all were retired in 1972. ■

Boxcars and reefers comprise much of the tonnage trailing DH643 9020 at Oil Junction on the northwest side of Bakersfield, Calif., in May 1965. The "bloody nose" is still bright and clean on the 8-month-old unit.

Gordon Glattenberg

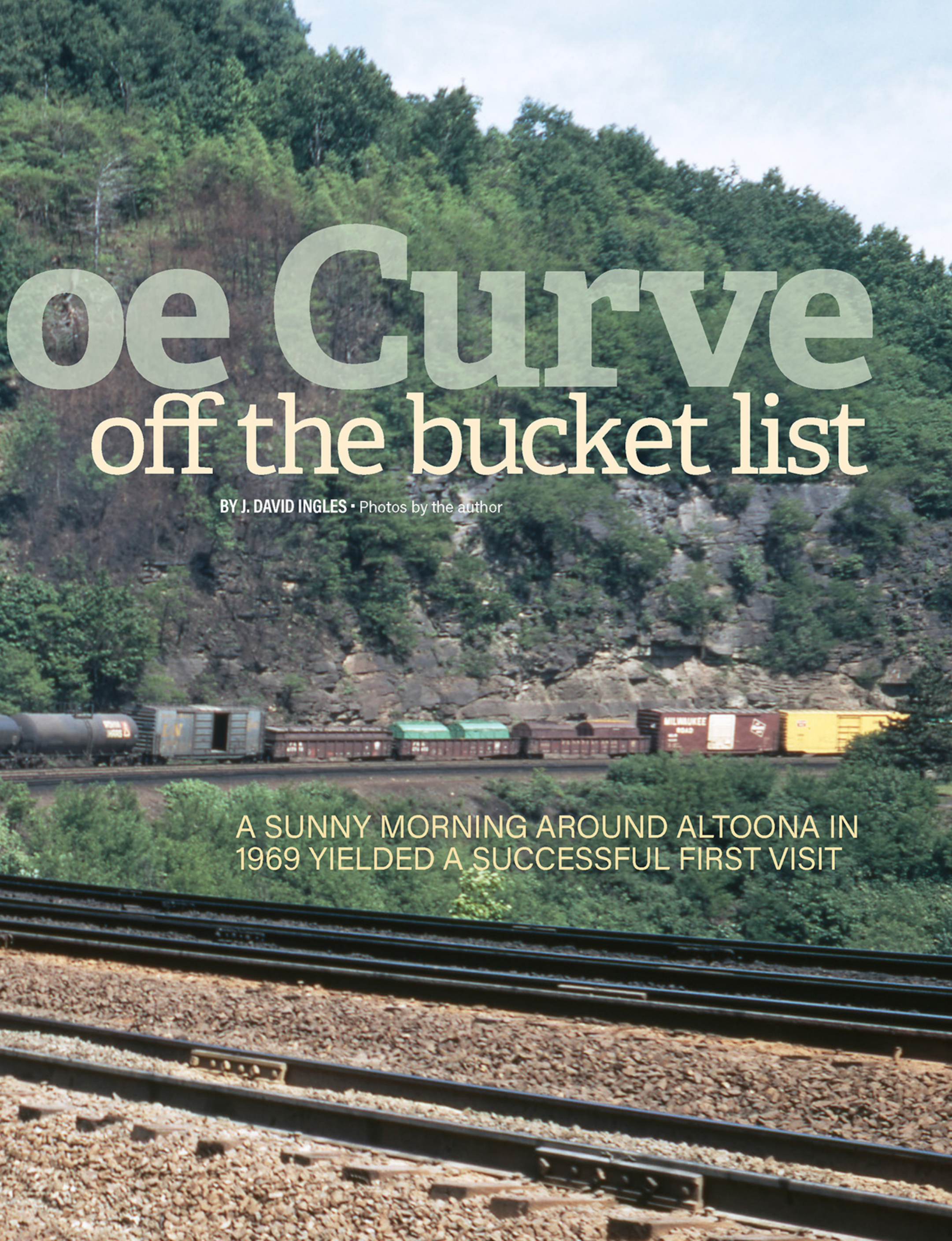
A. J. WOLFF has been interested in the UP since he watched Big Boys on Sherman Hill as a boy. This is fourth Classic Trains *byline. He thanks former SP Mechanical Department employee Bill Wolverton for his assistance.*

Checking ☑ Horsesh

The last of five westbounds to initially greet us on our May 30, 1969, visit passes on Track 4 with an unusual trailing unit, PRR F7B 3536. For a clearer view of it, see page 77.

oe Curve off the bucket list

BY J. DAVID INGLES • Photos by the author



A SUNNY MORNING AROUND ALTOONA IN 1969 YIELDED A SUCCESSFUL FIRST VISIT

4. One of each: The 6035 West's pushers, PRR 6092 and PC 6002, shove on a cabin car still in PRR red. Soon we'll relocate to the hillside at about this photo's left edge.
5. Hot pigs: The next train I photographed was 3178 West on Track 3, led by one of 155 PC-ordered GP40s (3105–3259), painted by EMD with an orange "C" in the logo.
6. Parade's end: We've crossed the tracks en route to our hillside perch before the 6073 West's SD40 and F7B, pictured close-up on pages 74–75, pass on Track 4.

1. Leading off: Our first train, on Track 4 and seen through a telephoto lens from the trackside park, is led by ex-Pennsy SD35 6035, one of about 100 ex-PRR and NYC units of various models repainted with a red "P" in the "mating worms" PC emblem. Trailing are one each four-motor EMD and GE units.

2. Consolation prize: Having missed a coming-on shot of our second train, led by two Alcos — C425 2431 and C628 6305, both still in Pennsy paint — with PC GP40 3253 trailing, I settled for this going-away view as it overtook the 6035's train on Track 3.

3. Pusher mix: Bringing up the rear of 2431 West is an ex-PRR cabin repainted for PC and a two-unit pusher, repainted SD40 6093 and still-PRR U25C 6504. The "shiny black" worn by 6093 was typical of most PC road units we'd see.

Odds are that many of us have, or have had, a "bucket list" of well-known places on the American railroad network to visit, photograph, and/or traverse by rail. Before joining the TRAINS staff in 1971, I didn't really have such, but as I look back now, my "top 20" U.S. rail landmarks would include the ones listed on page 79. They are not "ranked," other than separated as the "top 10" and "second 10," rather they're listed in more or less westward geographical order. In Canada, my only "must see" items were the St. Lawrence River bridge at Quebec City and Canadian Pacific's Spiral Tunnels in British Columbia, both of which I "checked off" decades ago.

Of the 10 spots listed, I'd made it to half before 1971, and my role at TRAINS helped me cross off the others as the years passed. The only one I missed was Kinzua before much of it was blown down. One of the five in the "top 10" I'd visited prior to joining TRAINS is today's topic, Pennsylvania Railroad's Horseshoe Curve.

VISITING THE CURVE

What drew me and friend Dick Wallin (plus two dozen other slide-trading diesel fans) to Pennsylvania in late May 1969 was the fourth annual "WGRF," our immodestly named and informally organized "World's Greatest Railfans" gathering, which took place in Pittsburgh. The first such get-together was in Cincinnati in April 1966, orchestrated by Louis A. Marre of Dayton, yours truly, and a few others. Many of the 26 who showed up were Detroit-area friends, but attendees came from nine states. In that era of trading slides by mail, the idea to do so in person caught on. Remarkably, an annual WGRF gathering still takes place (yes, with slides). In 1967, we met over Easter weekend in Kansas City, with increased attendance. The dates then shifted to Memorial Day weekend, in Minnesota's Twin Cities in 1968 and Pittsburgh in '69.

Having thoroughly covered Pittsburgh in 1962 ["Storming the Steel City," Fall 2009 CLASSIC TRAINS], it was an easy choice for Dick Wallin and me on Friday, May 30, to head the 2 hours east to Horseshoe Curve, which neither of us had visited. This was 16 months after the Penn Central merger, but the landmark retained its PRR flavor. There were still four tracks, numbered from the inside of the Curve as Tracks 1 through 4; Track 2 would be removed by Conrail in 1981.

We climbed the many stairs from the parking lot up to the trackside viewing area, and wound up staying about 3 hours. My 1969 pocket notebook is uncharacteristically sketchy for that day, presumably because of the sheer volume of trains, and our precarious second photo position. Dick's movie log also lacks some details, but we have documented that we saw 12 trains — 10 freight, 1 passenger, and 1 set of helpers running light to their next assignment.

First were five westbounds, four with rear-end helpers. The predominant power, both as helpers and road units, was ex-PRR SD35s and SD40s. Most were fully repainted, or bought new by PC, and they looked sharp. Shortly after we reached trackside came a westbound on Track 4 led by SD35 6035, one of about 100 units repainted with a red "P" in the "mating worms" PC logo, with a GP40 and a U33B as trailing units. Next was a faster westbound on Track 3, the noise of the passing 6035 West catching me off-guard for a coming-on shot, unfortunate as the lead unit was Alco C425 2431 still in PRR livery, with similarly unchanged C628 6305 as middle unit and PC GP40 3253 trailing. The 2431 West on Track 3 easily overtook the 6035 West,

7. Interloper: U28B 2864, in NYC's final livery, offers relief from ex-PRR power as middle unit on an eastbound piggyback train on Track 1 in this telephoto view from the hillside; 6511, one of PRR's 20 U25Cs, leads, while SD35 6023 trails. NYC bought no C-C freight diesels.

8. Front-end help: Look closely at this telephoto shot of an apparent four-unit head-end consist on an eastbound freight. Lead units 6002 and 6092 are helpers, as they were when pushing on 6035 West (photo 4, page 76). You also see the engineer of what is PRR 6098 East in his SD40's cab; both "road engines" are still in PRR paint.

☑ JDI's bucket list

TOP 10

Lackawanna's Tunkhannock Viaduct at Nicholson, Pa.
Erie's Starrucca Viaduct at Lanesboro, Pa.
Pennsylvania's Horseshoe Curve west of Altoona, Pa.
Southern's Saluda grade in western North Carolina
Great Northern's Stone Arch bridge in Minneapolis
Union Pacific's Sherman Hill west of Cheyenne, Wyo.
Rio Grande's Moffat Tunnel west of Denver
Santa Fe's Cajon Pass crossing in southern California
Southern Pacific's Tehachapi Loop south of Bakersfield, Calif.
SP's Donner Pass crossing west of Truckee, Calif.

SECOND 10

Boston & Maine's Hoosac Tunnel at North Adams, Mass.
New Haven's Hudson River bridge at Poughkeepsie, N.Y.
Erie's Kinzua Viaduct in north central Pennsylvania
Baltimore & Ohio's Sand Patch and Seventeen Mile grades west of Cumberland, Md.
Southern's "Loops" east of Asheville, N.C.
Louisville & Nashville's Hiwassee Loop in southeastern Tennessee
Rock Island's Mississippi River bridge at Davenport, Iowa
Great Northern's Cascade Tunnel at Scenic, Wash.
Western Pacific's Williams Loop west of Portola, Calif.

9. Diesel and steam: Next, two PC GP40s ease down Track 1 with a coal train; the ex-Pennsy N8 cabin behind the power wears the NYC green PC adopted for some rolling stock. Down at ground level is the 1940-built gift shop; at upper right is K4s 4-6-2 1361, placed on display in 1957.
10. Just in time: The lead E8 of an unrepainted ex-PRR and ex-NYC pair overtakes the head end of the eastbound coal train. The only passenger train we'd see on our visit, this is train 54, the Chicago–New York *Pennsylvania Limited*.

the faster train's pushers — PC 6093 and PRR U25C 6504 — passing us first; the 6035 West's pushers were PRR 6092 and PC 6002. A third westbound was led by PC GP30 2223, a PC SD40, and PRR SD45 6217, with no pusher. Fourth was a piggyback train on Track 3, led by PC-bought GP40 3178, one of a batch with the "C" on the logo in orange, and ex-Pennsy SD35 6032.

TO THE MOUNTAINSIDE

Feeling fortunate to have seen so many westbounds, we elected to do something that was common in those days but which has since become out of the question owing to overgrown foliage as well as the obvious safety and trespassing concerns. During a lull in the action, we walked across the tracks from the park and around the outside of the Curve to be able to shoot expected eastbound movements without the trains being backlit.

After we'd crossed the tracks but before we'd begun climbing the hill came yet another westbound. Running on Track 4, it was led by PC SD40 6073 and an F7B, 3526, still wearing a PRR keystone, one of 20 such units PC inherited from Pennsy. Shoving behind the NYC bay-window caboose were two SD35s.

Just after we walked over the tunnel-like road underpass below, we climbed up the mountainside through the trees and brush, each of us selecting a perch higher than the passing trains but with scant room to move about — Dick managed this with both a 35mm camera around his neck and a tripod-mounted movie camera to set up! The view limited us to shots of either approaching westbounds or going-away eastbounds. As it happened, all the trains we saw from up there were headed east.

First to appear, apparently before I'd gotten set up for photos, was a merchandise train on Track 2 with a C630 and SD45 up front and SD40 6136 and C628 6314 pushing behind the ex-PRR cabin. Then came a piggybacker on Track 1 with an interesting consist of two ex-Pennsy units, U25C 6511 and SD35 6023, bracketing NYC U30B 2864. The third eastbound was led by the two pushers from 6035 West, PC SD35 6002 and PRR SD40 6092, working as head-end helpers with the road power, PRR SD40s 6098 and 6047, as third and fourth units, with two more SDs on the rear.

After a trio of EMD helpers passed eastbound, two PC GP40s led a coal train by on Track 1, with an ex-PRR cabin in fresh PC green right behind the power. As that train was easing around the Curve, the only passenger train of our visit — No. 54, the *Pennsylvania Limited*, due into Altoona at 11:42 a.m. — overtook it on Track 3. With the noise of the coal train passing right below, the passenger train surprised me, but I got a distant shot just as the first of its two E8s appeared beyond the coal train's GP40s.

Tired of squatting on the hillside and getting hungry, and perhaps also leery of hanging out up there too long without permission, we called it a day at the Curve and headed back down. We got to trackside just as our 12th train passed, an eastbound consist of Flexi-Van flats and REA reefers.

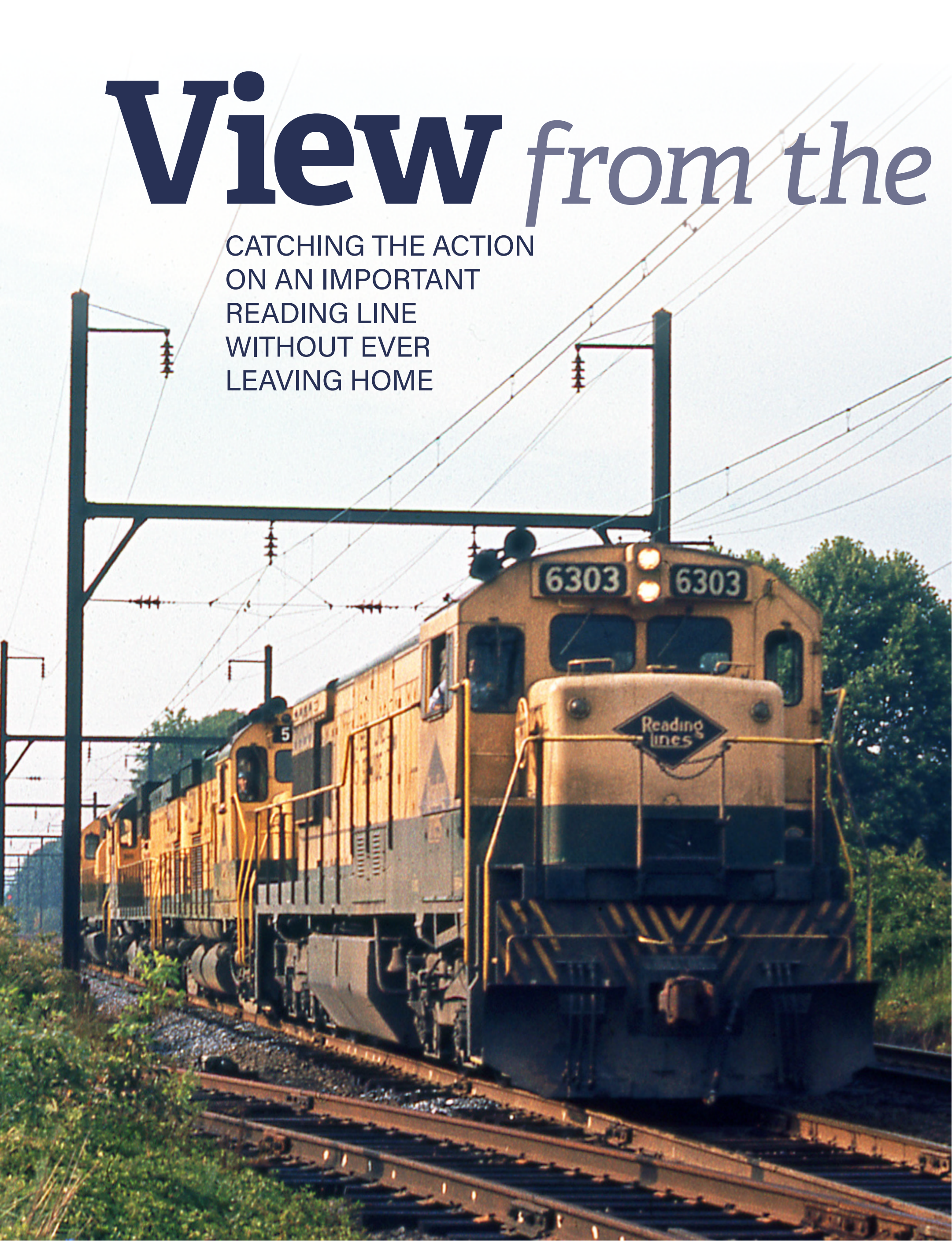
We walked across the tracks and back down the stairs to our car, first heading into Altoona for lunch. Afterward, we did some prowling around the yard and shops to the east, finding diesels in dead lines and in service. En route back to Pittsburgh, we stopped in Johnstown for more PC action and some of the EMD switchers of the local Bethlehem Steel plant road, Conemaugh & Black Lick. But with nice weather and many PC units either new or looking good fully repainted, we rated checking off Horseshoe Curve from our bucket lists a success.

J. DAVID INGLES, Classic Trains' senior editor 2000–18, is now contributing editor. His "Ingles Color Classics" series began in 2011.

MORE ON OUR WEBSITE See the color movies Dave's friend Dick Wallin took during their 1969 visit to Horseshoe Curve at ClassicTrainsMag.com

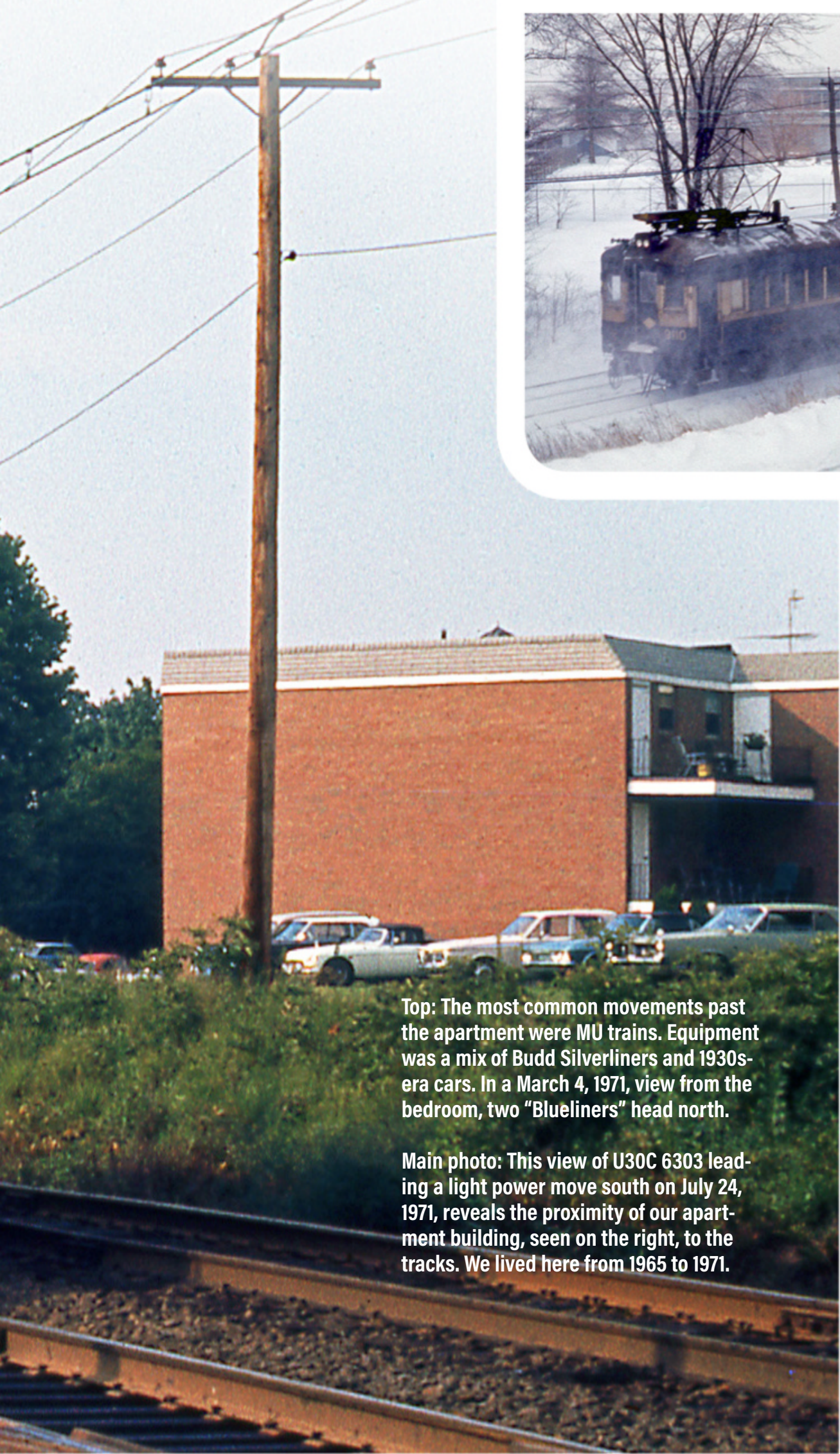
View *from the*

CATCHING THE ACTION
ON AN IMPORTANT
READING LINE
WITHOUT EVER
LEAVING HOME



apartment

BY DALE W. WOODLAND
Photos by the author



Top: The most common movements past the apartment were MU trains. Equipment was a mix of Budd Silverliners and 1930s-era cars. In a March 4, 1971, view from the bedroom, two "Blueliners" head north.

Main photo: This view of U30C 6303 leading a light power move south on July 24, 1971, reveals the proximity of our apartment building, seen on the right, to the tracks. We lived here from 1965 to 1971.

Between 1965 and 1971 my wife Susie and I lived in an apartment complex along the Reading Railroad's Bethlehem Branch in Lansdale, Pa., 24 miles north of Philadelphia. The complex was on the east side of the tracks about two-thirds of a mile south of the Lansdale station, where the 10-mile Doylestown Branch diverged northeast. The deck of our apartment faced the tracks looking southwest while the two windows at the back faced the tracks looking northwest. With several grade crossings nearby, the trains announced themselves in time to take photographs. This portion of the line hosted an array of both passenger and freight trains.

Passenger trains consisted of electric multiple unit cars to Lansdale and Doylestown as well as Budd Rail Diesel Cars (RDCs), which ran to Bethlehem. The MU trains provided half-hourly service on weekdays with both recently delivered Budd Silverliners and the 1930-era MU cars built by Harlan & Hollingsworth. Most the older MUs were painted in the Reading's traditional green, while others, recently modernized with public funds, wore an attractive blue-and-white scheme, earning them the nickname of "Blueliners." The MUs operated in two-

Above: Alco C424 5209 leads a three-builder consist on a northbound iron ore extra on April 23, 1971. The 72-car Philadelphia–Bethlehem trains operated over a roller-coaster profile with a ruling grade of 1.2 percent.

Left: Three Alco RS3s pass the apartment on September 5, 1970, with a prophyllite ore train. The ore, used in the production of ceramic tiles, came in 66-car trains four times a year.

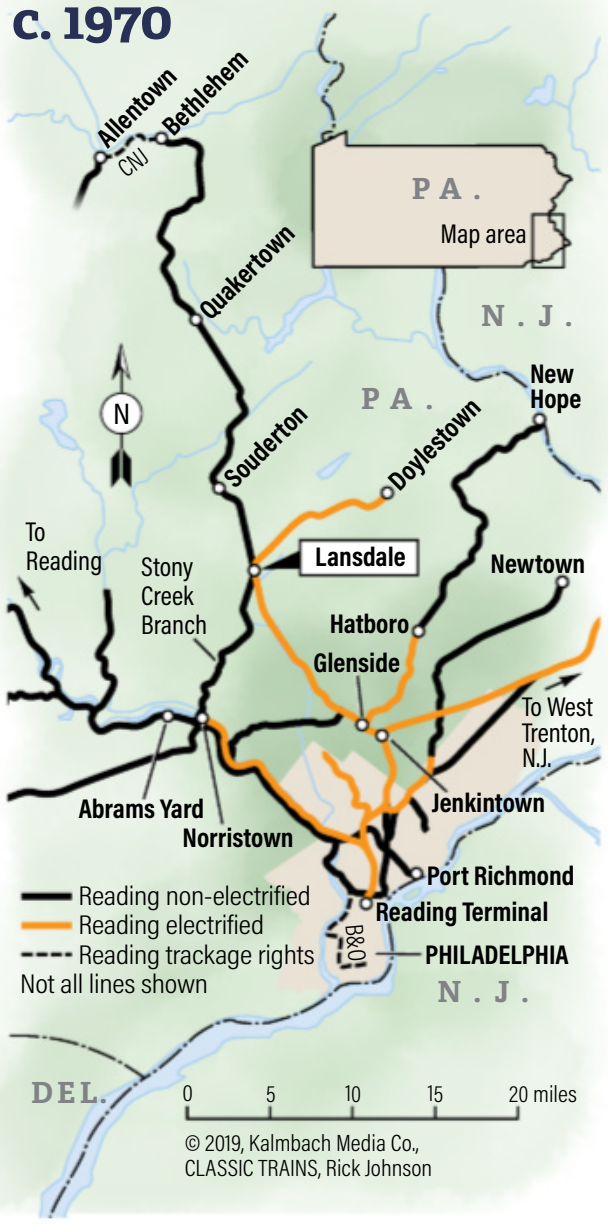
Right: Returning to Philadelphia with a caboose after delivering an iron ore train to Bethlehem, three Alco C630s have stopped at the Lansdale station on April 18, 1971, to await clearance to proceed south into the electrified commuter zone.

car trains for most of the day, but during the rush hours the consists could be as long as eight cars. The RDC trains likewise varied in length between two and four cars. The RDCs provided a faster trip between Lansdale and Philadelphia with their limited-stop schedule.

Freight trains also came in various forms including both iron and prophyllite ore trains, merchandise trains, and locals serving industries along the line. Throw in ballast trains and occasional special moves and the variety provided for interesting photos. The heaviest trains were the import iron ore extras, which operated subject to the arrival of ships at the Reading's Port Richmond terminal on the Delaware River in Philadelphia. These 5,000- to 8,000-ton trains traversed the hilly Bethlehem Branch with a combination of three to five first- and second-generation diesels. Our time at the apartment coincided with the record year of 1966 for iron ore imports through Port Richmond. Another bonus was the delivery of the Reading's first six-axle power since 1953.

The branch served as a test bed for the new power. The road tested trios of brand-new Alco C630s, GE U30Cs, and EMD SD45s on iron ore trains to Bethlehem. The locomotive builders had promised

RDG's Bethlehem Branch, c. 1970



On August 8, 1971, the usually nocturnal BP-3 merchandise train is running late as it heads north behind two GP35s and a GP30. At this time the daily train originated at Abrams Yard near Bridgeport, Pa., and traveled north on the Stony Creek Branch to Lansdale, where it then continued north on the Bethlehem Branch. Because of the light rail on the Stony Creek Branch this train always had four-axle power.

GP35 3630 leads train BP-3 southbound at 6:15 a.m. on April 18, 1971. The longer days of the year offered a chance to photograph this movement. The second unit, GP7 619, shows its variation of the Reading's green-and-yellow scheme, introduced in 1962 on GP30s.

On January 1, 1970, two Budd RDCs travel north (timetable west) as train 313 to Bethlehem. The RDCs replaced locomotive-hauled trains on the Bethlehem Branch in 1962 after the U.S. Post Office and REA Express ended service on the Reading. The purchase of the 12 RDCs exemplified the Reading's effort to provide good service even as passenger counts dwindled.

SW1500s 2766 and 2766 power a train spreading ballast on Sunday, April 18, 1971. Sunday commuter trains operated on two-hour headways, allowing more time for track work. These SW1500s were part of the Reading's second order for the model; they rode on Flexicoil trucks unlike the first order, which had standard switcher trucks.

that three six-axle units could replace five four-axle units in this service, and the Reading was determined to verify this. The prophyllite ore trains also came out of Port Richmond, but less frequently than the iron ore trains. These 60-car trains went to the American Olean Tile Co., located on the Doylestown Branch on the north side of Lansdale about four times a year. Power was usually three Alco RS3s or something similar. The ore arrived at Port Richmond from Newfoundland by ship. Merchandise trains mostly ran at night, so only delays and holidays allowed for photographing them.

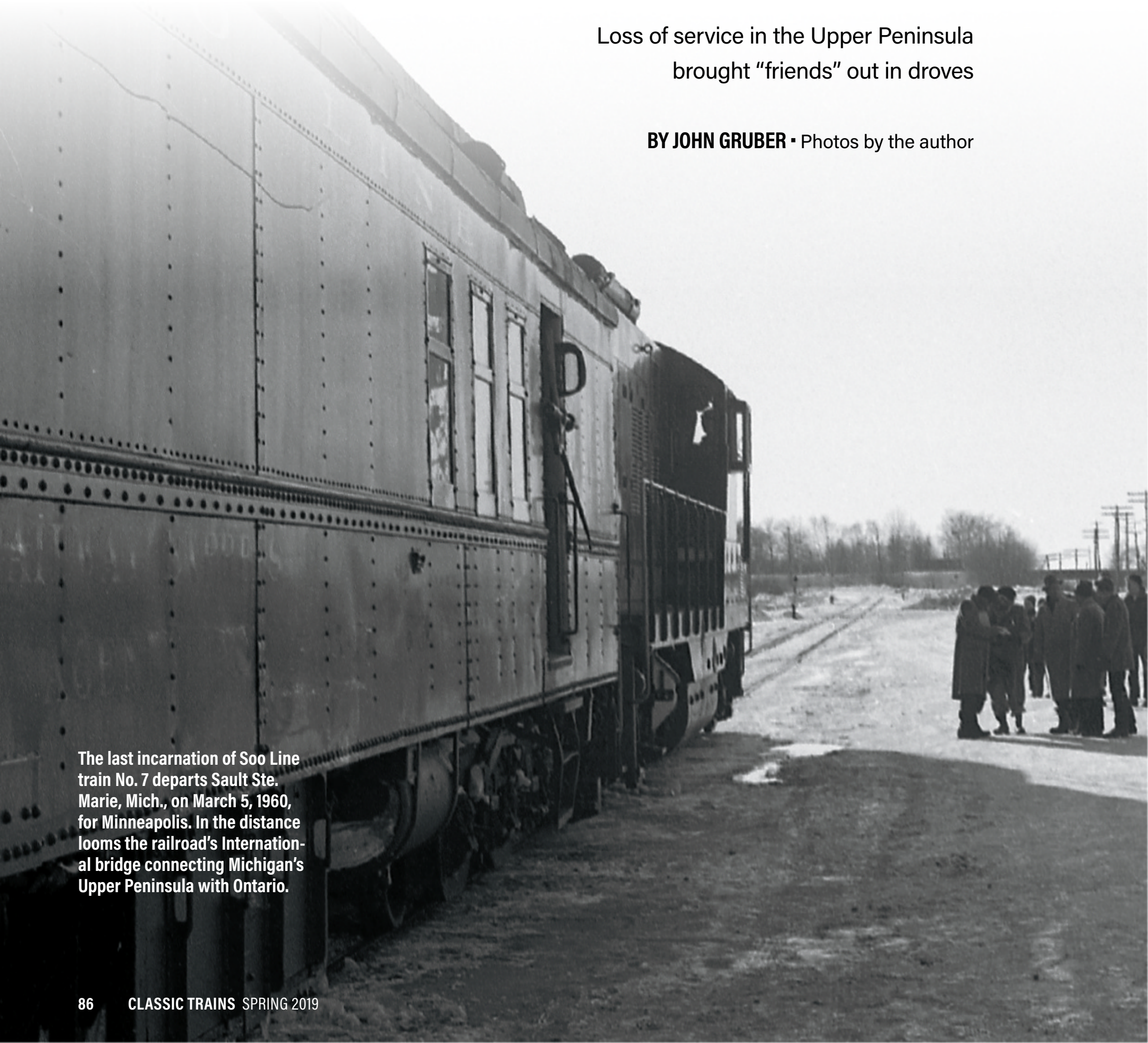
With the birth of our first daughter in 1970 it was time to leave the apartment for a home about 5 miles to the north in Souderton. While I no longer lived right beside the Bethlehem Branch, I was fortunate since our Souderton home was in sight of the line. ■

DALE W. WOODLAND, who still lives in Souderton, is a retired schoolteacher. He is director of museum operations for the Reading Railroad Heritage Museum. This is his seventh article in a CT publication.

Farewell
TO SOO LINE 7 AND 8

Loss of service in the Upper Peninsula brought "friends" out in droves

BY JOHN GRUBER ▪ Photos by the author



The last incarnation of Soo Line train No. 7 departs Sault Ste. Marie, Mich., on March 5, 1960, for Minneapolis. In the distance looms the railroad's International bridge connecting Michigan's Upper Peninsula with Ontario.

IT WAS A BUSY SATURDAY FOR SOO LINE'S PASSENGER TRAIN IN UPPER MICHIGAN, stopping for passengers, mail, and express at stations and crossroads. Then, it was over. The mail and express — lifeblood of trains 7 and 8 — shifted to trucks after the March 5, 1960, final run, but passengers were on their own.

In the days before the internet, news about the last run came from newspapers, specifically the *Milwaukee Journal* and *Milwaukee Sentinel*, which then offered full coverage and extensive distribution networks throughout Wisconsin and the Upper Peninsula. Gladstone, Mich., the Soo's division headquarters and a stop for the trains, is 234 miles north and slightly east from Milwaukee.

It was a sad day for the communities, many of them established by railroad officials who had incorporated the Sault Ste. Marie Land & Improvement Co. to build the townsites along the 501-mile route between Minneapolis, Minn., and Sault Ste. Marie, Mich. (a.k.a. "The Soo").

Deluxe passenger service started in 1889. The *Atlantic Limited*, the first train in the north country with sleeping cars with vestibules, ran through to Montreal and Boston. After World War I, the Soo discontinued the Boston sleeper and then the Montreal sleeper. More and more local work was assigned to the once-proud limiteds. But in 1938 the railroad added a combination air-conditioned sleeper and dining car and offered a five-course meal for $1.

Service started to decline in 1953, however, when a six-day-a-week schedule was adopted. In 1957, the sleeper-diner was dropped, and service reduced to a 16-section sleeper three days a week; meals were available in the station restaurant in Trout Lake, Mich. This was the situation on September 1, 1959, when the Soo took out newspaper ads to announce it would soon be

Clockwise from top left: Train No. 8 arrives at Sault Ste. Marie, Mich., from Minneapolis on its final run east; the crew of No. 7 hangs a funeral wreath at Sault Ste. Marie before the last departure; 30 Cub Scouts go for one more ride; a conductor catches up on office work.

asking the Interstate Commerce Commission for permission to discontinue the trains.

The ICC granted permission on January 27, 1960, writing in its formal, legalistic manner that it "found that the continuance of operation by the Minneapolis, St. Paul & Sault Ste. Marie Railroad Company of passenger trains Nos. 7 and 8 between Minneapolis, Minn., and Sault Ste. Marie, Mich., is not required by the public convenience and necessity and will constitute an undue burden on interstate commerce." The train served 62 stops between the endpoint cities; all but 8 were located on paved, all-weather highways. At most of the stations, on average, less than one passenger a day got on or off the trains.

To allow the U.S. Post Office and Railway Express Agency time to arrange substitute service, the railroad continued the trains until the first week of March. It also established triweekly mixed service between Rhinelander and Gladstone and Gladstone and Sault Ste. Marie.

The last eastbound train No. 8 left Minneapolis on March 4, picking up a mail-express car from the Milwaukee Road's *Copper Country Limited* at Pembine, Wis. At every stop, the station activity confirmed what the ICC statistics reported, that mail accounted for more 60 percent of the train's revenues, augmented by the express and other head-end traffic such as milk, cream, and newspapers.

The final train left Sault Ste. Marie with a funeral wreath, presented by Trainmaster Ted C. Jago to the conductor in a

Top: Westbound Soo Line train No. 7 departs Sault Ste. Marie for the last time on March 5, 1960, as the well-wishers return to their cars. In place of the once-proud passenger train, the railroad would operate a triweekly mixed train between Sault Ste. Marie and Gladstone, Mich. Bottom: Eastbound No. 8 pauses in Rudyard, Mich., on its last trip to Sault Ste. Marie, where it will turn to become the final No. 7. The light-weight baggage ahead of coach No. 1027 is the mail-express car picked up from the Milwaukee Road's *Copper Country Limited* at Pembine.

brief farewell ceremony broadcast by the local radio station. The wreath hung from the last car of No. 7 all the way to Minneapolis. As the crowd waved and horns honked, the train left at 4 p.m. with about 67 people on board including 30 Cub Scouts.

Another group boarded at Manistique, Mich., where a local man paid the fares for 31 children to ride the 12 miles to Cooks. While the conductor filled out half-fare coupons, the children sang "I've Been Working on the Railroad" and climbed on the baggage racks.

Conductor Edward Cannon and brakeman Oscar Bloomquist worked the last eastbound train from Gladstone to Sault Ste. Marie in the morning, and then the last westbound as far as Pembine. The engine crew consisted of engineer Irving Willis and fireman Francis Krout. All were from Gladstone, where a hundred people turned out and the loss was felt especially hard.

It was a "sad farewell," the *Escanaba Daily Press* wrote. "It didn't have enough passengers to stay in business, but it had so many friends that at every station stop along the route there was a group out to see the last train of a service that started 72 years ago, and which had been a big force in the development of the Upper Peninsula."

Sadly, this scene was often-repeated across the country as passenger service declined in the 1960s.

JOHN GRUBER, a prolific photographer, author, and founder of the Center for Railroad Photography & Art, died in October 2018.

On-the-job training

New York Central's management trainee program exposed me to computers, freight yard design, engine service, the *Century*'s obs car, and more. And in the Army, I worked with steam!

BY CHRIS BURGER · Photos by the author

The Central's New York District signal engineer's office, where I spent a good portion of the working year between my freshman and sophomore college terms, was only a floor or two away from the personnel department. One day, almost on a whim, I decided to stop by there, introduce myself, and see what opportunities there might be given my interest and experience. The ensuing discussions led to my later summer jobs in the signal department and interlocking towers and, more importantly, the railroad's transportation department management training program.

Talk about the best of everything — how about being paid to learn the ins and outs of the railroad, complete with a system-wide pass, good on all trains, including the *20th Century Limited*? The official job title was "Freight Transportation Inspector Trainee," and the program was structured to give us exposure to the functions that were essential or related to the transportation department. Many if not most of the trainees were college graduates with little or no railroad experience. My railroad background was probably one of the reasons I was promoted

The engineer looks out from the cab of his New York Central GP7 at Livernois Yard, Detroit, in January 1964.

out of the program before completing it.

I had registered for the military draft when I was 18. I got a low number, so I knew I would be drafted if I didn't do something on my own. The solution was an Army Transportation Corps Railway Operating unit. The history of these units is fascinating and inspiring, and the Central was one of the many railroads that sponsored them.

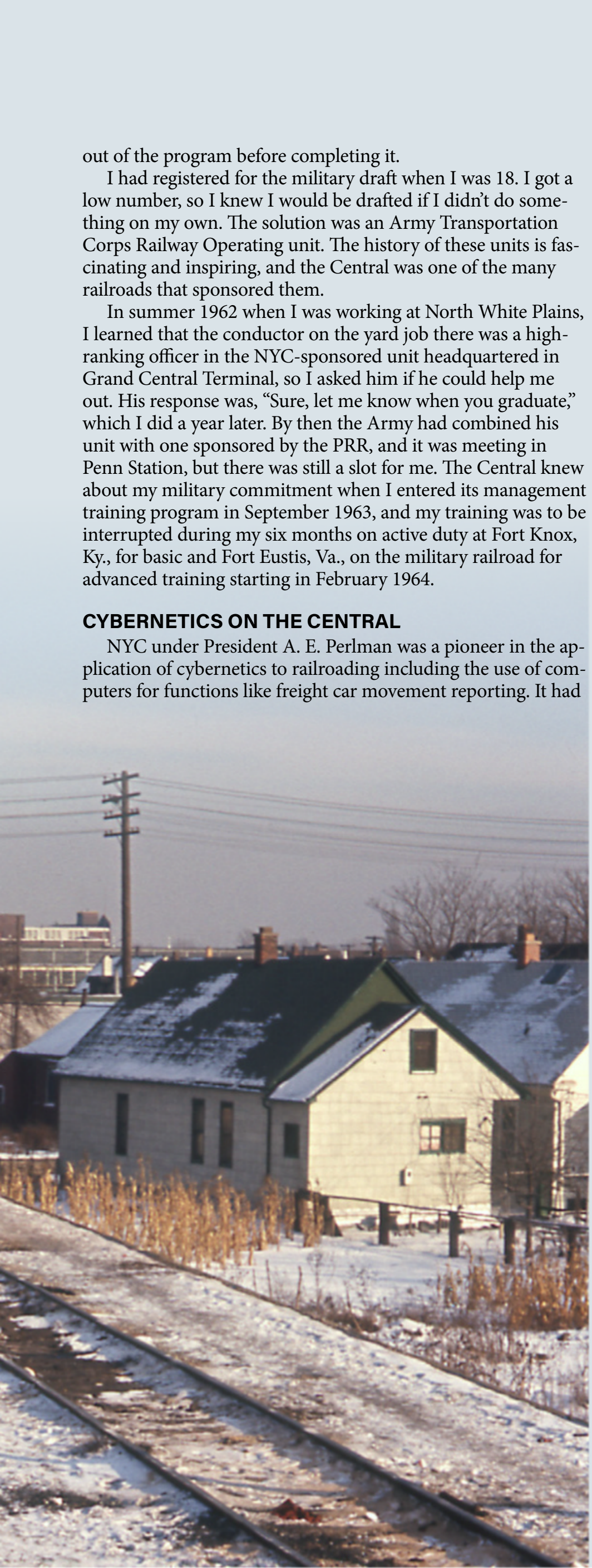
In summer 1962 when I was working at North White Plains, I learned that the conductor on the yard job there was a high-ranking officer in the NYC-sponsored unit headquartered in Grand Central Terminal, so I asked him if he could help me out. His response was, "Sure, let me know when you graduate," which I did a year later. By then the Army had combined his unit with one sponsored by the PRR, and it was meeting in Penn Station, but there was still a slot for me. The Central knew about my military commitment when I entered its management training program in September 1963, and my training was to be interrupted during my six months on active duty at Fort Knox, Ky., for basic and Fort Eustis, Va., on the military railroad for advanced training starting in February 1964.

CYBERNETICS ON THE CENTRAL

NYC under President A. E. Perlman was a pioneer in the application of cybernetics to railroading including the use of computers for functions like freight car movement reporting. It had established the Mechanical Car Reporting Department to implement this systemwide, and it was my first assignment as a trainee. I was to travel with Mike Albano, a former clerk from Selkirk, N.Y., learning from him as we went and helping him instruct yard clerks, agents, and other personnel who'd be working with the computerized system. We went to Boston, Detroit, Buffalo, Dewitt (Syracuse), Cincinnati, and a few other locations, encountering confusion, skepticism, and, given the job losses the new system implied, opposition. But everyone learned from the process, and the feedback and suggestions we got helped improve the program.

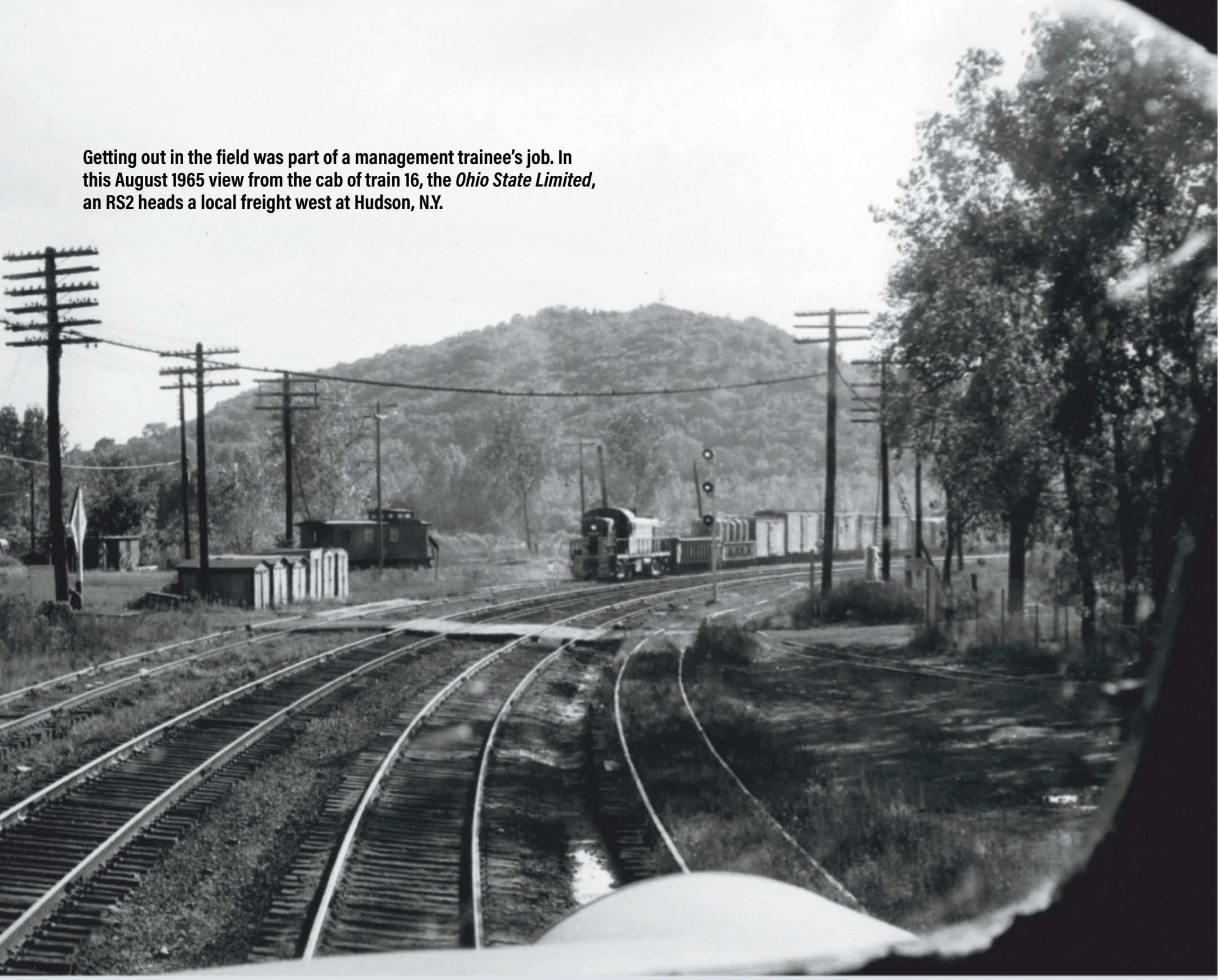
Opposition to technology due to job security concerns wasn't limited to computers, either, as I saw it related to radios, which were just being introduced in train service. Crews were tossing them overboard and otherwise trying to prevent or limit their use. Ultimately it all settled down to the point where crews would object to going without them.

Mechanical Car Reporting not only kept track of car movement but also generated reports that helped plan and manage. The one that helped me the most in later jobs was called the "In But Not Out." It could be printed on demand for any yard and identified any car reported into it but not out within 24 hours. A companion report was the "Out But Not In." At the time, trains were still physically checked as they entered and departed yards, and it was easy for a clerk to transpose or miss a number



New York Central steam tugboats enjoy a sunny New York Harbor day in December 1963 at the road's pier in Weehawken, N.J.

EMDs and Baldwins — including a set of Sharknoses on which I'd be fireman — stand in NYC's engine terminal at Columbus, Ohio, in 1964.



Getting out in the field was part of a management trainee's job. In this August 1965 view from the cab of train 16, the *Ohio State Limited*, an RS2 heads a local freight west at Hudson, N.Y.

or two, so if NYC 123456 was reported in but not out, and NYC 124356 was out but not in, we could be pretty sure we didn't have a delayed car. These were useful tools for yard management, and one could be certain that if his boss or his boss's boss came to visit, the first thing he'd want to do was check the In But Not Out.

In addition to the structured part of the program, management trainees were free to roam around the railroad to study things that interested us. Shortly after beginning the program I learned about the American Railway Progress Exhibition in Chicago and got permission for several of us to ride the *Century* out there and back to take it in. While in the nation's Railroad Capital, I visited the various passenger stations for some photography.

I rode a lot of passenger trains as an NYC trainee, often on the head end, especially over the more scenic parts of their route. My favorites were the Hudson, Mohawk, and Boston & Albany divisions. Another favorite activity was to ride the NYC tugboats around New York Harbor. I rode freight trains, too, with emphasis on lines without passenger service. One memorable trip was from DeWitt to Montreal on train UM-1.

I'd always run into other railroaders who were glad to chat on these trains, and it was in the *Century*'s observation car that I got a valuable piece of advice. Bob Foster, an NYC official who would later be my boss, and Willis Copeland, the New Haven's general road foreman of engines, were returning from a convention in Chicago. The three of us chatted well into the evening, and as we were getting ready to split, Copeland told me he'd enjoyed the evening and also offered this advice: "Never forget, son; there's a big difference between a railroad man and a railroad fan." I never did forget, and passed up a lot of photo opportunities over the years, but it was and is good advice.

Shortly before I was to leave for basic training, I was told I'd be spending a couple of days with company photographer Ed Nowak to be photographed representing the transportation program in a college recruiting brochure. In addition to some nice photos for my scrapbook, as well as for the brochure, which was titled "New Frontiers in Transportation," I picked up from Ed some tips on photographing steam locomotives, which I'd have an opportunity to do at Fort Eustis.

RAILROADING FOR UNCLE SAM

The Army's training railroad at Fort Eustis consisted of three subdivisions; two were essentially loops and the third was a long

Brand-new Green Bay & Western C424 No. 311 was part of the Alco exhibit at an October 1963 rail industry exhibition in Chicago.

Visits to Chicago offered glimpses of "exotic" passenger trains. Here, Milwaukee Road's *Morning Hiawatha* departs Union Station in 1963.

Also in 1963, Alco PA No. 1052 and an E8 are outside Chicago's Dearborn Station with the Wabash's *Blue Bird* from St. Louis.

lead to the Chesapeake & Ohio interchange, a yard, enginehouse, and dispatching office as well as branches to the base's port on the James River. Equipment was a mix of steam and diesel locomotives as well as passenger and freight cars. Army personnel running the railroad were members of the 714th Transportation Battalion Steam & Diesel Electric, "TBROS&DE" in Army jargon. It was made up of regular Army men, many of whom were professional railroaders, and reservists like me. Since the regular guys didn't need training, we reservists got to run most of the trains, with the regulars assigned other jobs. They'd tell you that TBROS&DE meant "Take broom, rake, or shovel and do everything."

My buddy at Fort Eustis was Ashby Bush, a Southern Pacific conductor working out of El Paso. We enjoyed checking out other railroads in our spare time. We went up to Potomac Yard and Ivy City in Washington, D.C., and to Newport News; once we rode a C&O coal train from Richmond. What I remember best about Ashby, however, was his ability to put in a full hot, humid Virginia day on the railroad, at the end of which he and his fatigues would look as fresh and clean as when he started, whereas I'd look like I'd been through a wringer. I always feel guilty when I'm thanked for my military service because for me it was a blast.

When my Army time was up, it was back to NYC's training program and to the Director of Terminals office. The name was somewhat of a misnomer as the office was involved in the design of yards and terminals, and studies of various kinds. I got to help in the design of the new Selkirk hump yard and of one which was never built in Worcester, Mass., in connection with a New England railroad merger study, involving the New Haven, Boston & Maine, and NYC. As part of the effort, I became the Central's representative on an inspection trip over the B&M from Boston to Mechanicville. We used a set of B&M's RDCs, one of which had been outfitted as a business car of sorts. Knowing I'd probably be the most junior employee on board, I decided it'd be best not to be toting a camera, which turned out to be dumb as I was about the only person there without one!

In addition to the structured part of the program, management trainees were free to roam around the railroad to study things that interested us.

Fort Eustis personnel prepare two Army 2-8-0s to doublehead an NRHS excursion over the base's training railroad in mid-1964.

I was enjoying myself and learning a lot with the Director of Terminals when, in spring 1965 I was sent with other trainees to locations in Ohio to work as firemen and brakemen. The Central and other railroads were working to eliminate the state's full crew law and had curtailed hiring in anticipation of getting it done — which it ultimately was, but not in time for the seasonal increase in business. We were part of what I thought was a brilliant staffing solution and training opportunity. I was sent to Columbus to be a fireman on the road extra board working between there and Toledo. This was a busy single-track, timetable-and-train-order and manual-block railroad during the Lake Erie shipping season with coal moving from West Virginia to the docks in Toledo.

SUMMER AS A FIREMAN

I found a room within walking distance of the West Columbus yard owned by Mrs. Leona Lyle, the widow of an engineer. She was used to phone calls at odd hours, which came frequently as I usually got called out on my rest. I loved it, including the pay, as I was now a locomotive fireman, not a trainee and one of the early lessons was that firemen were paid more — a lot more! In addition to the base pay, NYC labor agreements required extra pay for things like initial and terminal delay, engine changes, off-regular assignment duty, and runarounds. The money was great, and in some cases I understood how it came to be, but I also realized it couldn't continue. These things varied from railroad to railroad and sometimes from one part of a railroad to another. I didn't realize until years later just how generous the NYC was in this regard.

During a weekend jaunt up from Fort Eustis, ACL, Southern, and C&O E units idle on the ready tracks at Washington, D.C., in May 1964.

The local crews were understandably suspicious at first about working with us "management guys," but it didn't take long to fit in and gain "throttle time" experience, friendship, and advice. Believe it or not, one of the things that helped break the ice was my cap, made by Connecticut's Thompson Cap Co., which made a variety of good-looking caps and other items mostly for New Haven men. Some of the NYC engineers I worked with admired my white "summer cap" and a couple of others; the word spread, and soon I had an order for about 20 to relay "back east."

Our crew district was 119 miles, and trips often consumed the then-maximum time of 16 hours on duty, much of which was spent in sidings. It was tough to stay awake sometimes, especially around sunrise and even more so for some of the older engineers who would occasionally doze off on the road. I'd blow the whistle if I saw this, and they'd come to and usually thank me. I'm actually surprised it didn't happen more often, given the long and irregular hours. I suppose at first they wondered if I'd report them, but I never did. My first opportunity to run came right after such an incident.

I had always had a great interest in operating rules and train orders. We had the latter, in spades, on the Columbus–Toledo line, and this was my first real opportunity to work with them on a single-track railroad. Northward trains were second and third class, and often ran in sections, while southward trains ran as extras. This required running orders, meet orders, and register check orders, among others, delivered at a half dozen or so locations. Southbound extra crews had to be careful not to get on the time of the opposing superior trains, too.

I still have the orders from my last trip there in November 1965 when the lake season was winding down and it was time to go back to being a trainee. This wasn't to last long, however, as a month or so later Leo Riley, who was general superintendent of transportation and in charge of the training program, said he wanted to promote me. Leo was a cigar-smoking, tough-talking railroader whom we all respected, and his message was something like, "It's time to get your rear in gear and go to work." He brushed away my objection that I hadn't gone through even half of the training program. He felt I was ready, so I was off to Cleveland as a general yardmaster at Collinwood Yard, where I would be working for General Manager Mike Flannery — "one of the best." ■

CHRIS BURGER, pictured in uniform at Fort Eustis in 1964, retired in 1998 from a career with NYC, New Haven, Chicago & North Western, Central Vermont, and Central of Indiana. He lives with his wife Rita in north-central Indiana. This is the seventh entry in his "Best of Everything" retrospective series.

My summer romance with "Purchasing & Stores"

Recalling fondly a part-time career on the Santa Fe

"Room 1015" read the lettering on the translucent glass window in the door in the Executive Department of the Santa Fe Railway's general offices in Chicago's Railway Exchange Building. The time was mid-January 1956.

I didn't have an appointment. A month earlier, during a phone conversation with my father, Santa Fe President Fred G. Gurley said in what surely was an off-hand remark not to be taken seriously, that he would enjoy meeting me should I ever have occasion to be in downtown Chicago. Well, here I was in downtown Chicago! J. P. Reinhold, assistant to the president, nonetheless graciously directed me to be seated. I watched him disappear down a long corridor. A minute or two later he returned with an invitation to follow him back down that same hallway and into a lovely room with honey-colored wood paneling and furnishings upholstered in the muted earth tones of the Santa Fe's Southwest. "Mr. Gurley is in a meeting just now, but he will be with you shortly."

I settled into a comfortable chair. Not long after, Mr. Gurley appeared with an extended hand and a warm greeting. After some introductory small talk, he guided the conversation to whether I had given any thought to someday working for a railroad. I confessed that I hadn't, but he pressed on, opining that it was never too early to give consideration to what one eventually will do with one's life. The railroad was always looking for young men who were passionate about the industry and who possessed the educational background to make a difference. He advised me to think about railroading as a career, and if interested, I could test a vocation by summer employment with the Santa Fe. Since I was too young at age 15 to be legally employed that coming summer, he suggested I write him early in the next year and he would set things in motion.

I did follow through. Santa Fe's Purchasing & Stores Department was located on the ninth floor of the building, and in early June 1957 I reported for the first day of what would become my seven-summer adventure in a department that doesn't immediately spring to mind when one thinks about the romance of railroading. Yet during those summers, I discovered that Purchasing & Stores had its own story to tell within the larger narrative of a how a railroad worked. That is, the department played a key, although not very glamorous, role in making the romance happen.

For decades, signs atop the Railway Exchange Building on Michigan Avenue in Chicago proclaimed to the world that one of America's greatest railroads was headquartered there.

Santa Fe

Purchasing & Stores was a single department with two separate spheres of operation. Stores was responsible for storing, inventorying, distributing, and requisitioning supplies and material used over

The Way It Was

Santa Fe's 13,172-mile system. The General Store at Topeka, Kans., was the clearing point for all requisitions from Stores to the Purchasing Department in Chicago.

It would be difficult for anyone born after 1970 to comprehend how labor-intensive and complex was the procurement process on railroads back in the 1950s. Trade magazine *Modern Railroads*, in its December 1953 issue, described how the department had been reorganized to reduce procedural steps by placing primary responsibility for purchasing each class of material with a buyer who headed a specialized sub-department, or section. Before that, pricing, ordering, and invoicing were handled by different groups of people. These sub-departments had responsibility for specific categories of material and handled all the details from the time the requisition came in from Topeka until the material was ordered, received, and payment authorized.

This system enabled each sub-department to acquire a specialized knowledge of the specific material for which it was responsible. There were sections for steel and steel products, fuel, electrical components and supplies, lumber and paper, paints and chemicals, machine parts and related material, equipment, and even a miscellaneous section for such items as utensils, linen tablecloths, china, and crystal for dining, lounge, and business cars. A secretarial pool and a file room served the whole department.

My first task wasn't difficult: clear up a backlog in the file room. Invoices for material received and paid for were to be filed alphabetically by supplier name and then numerically by invoice number. Mountains of unfiled invoices covered the tops of two adjacent desks, a pair of paper precipices ready to cascade onto the floor. It all seemed simple and straightforward, and by the end of the week everything was in its proper place.

Short-lived pride

The following Monday morning I made a big mistake: I went to the office manager with news of my accomplishment and asked for more work. My pride in a job well done was short-lived, as some clerks got wind of my request and told me to never ask for something to do because it made others look bad. Apparently Santa Fe's management culture of excellence hadn't quite yet reached the clerks. Lesson learned: Be wary of those giving dubious advice.

I proceeded to bring order to the requisition forms on the other side of the file room, which were in the same state of disarray as the invoices the week before. After those, it was on to the department file room on the third floor, where reposed dead invoices and requisitions.

One entered this room through the Mail Department. Four mail clerks, who happened to be African-Americans, comprised the staff. All tended to the mail, but two of them also were on call as chauffeurs. Rich Findley, a rotund, jolly man with an infectious laugh and commanding presence, was head of the department. He was also the head chauffeur.

Reflective of the era, Findley spoke of his gratitude for the opportunities the railroad made available to black people for good jobs that could sustain families and build futures. As a chauffeur he met titans of industry, movie stars, athletes, and politicians. Sagacious beyond measure, he would offer his reflections upon the human enterprise that I came to realize were forged through the crucible of discrimination and lingering racial segregation. My window on the world grew larger that summer.

> It would be hard for anyone born after 1970 to know how labor-intensive the procurement process was on railroads in the 1950s.

The next year went more smoothly because I had identified the unwritten rules of engagement. I also had advanced, from filing and other mindless tasks to the sub-departments where I was "relief," covering for clerks during their vacations. This involved reconciling invoices against the shipping notices and the original purchase orders. If there were variances of any kind, it was necessary to find the reason so payment could be authorized for exactly what was ordered and received. It was time-consuming work, because often items were back-ordered or omitted from the shipment, or incorrect items were sent, or the correct item was sent but incorrectly recorded on the shipping notice or invoice. As most of the purchases were net discounted, these discrepancies had to be cleared up in a timely manner. And since these supplies were sent to facilities in 12 states, the telephone was indispensable in chasing down errant or missing material. To that end, Santa Fe even maintained its own limited telephone network.

In the April issue

Trains MAGAZINE

SHORT LINES AND REGIONALS are in the spotlight. We'll visit South Carolina's **AIKEN RAILROAD** with its two-tone GP30s. Then join us in Pennsylvania for a railroad that combines coal, CTC, and more: **READING & NORTHERN.**

Our Journey to Promontory series looks at the first transcontinental railroad as it appears today. And we'll treat you to a major feature on another favorite transcon, **SANTA FE.**

We've also got exclusive interviews and news about short lines and regionals. It's all in **the** magazine of railroading!

On sale March 12, 2019

By my sixth summer, evidently I had impressed some of the buyers, because on occasion they asked me to cover for them, albeit supervised. Over the previous summers I had developed a working knowledge of procedures as well as material. It felt good to know that I had earned their confidence. It was also good to know that I played a small part in procuring the supplies and material essential to the Santa Fe's operational success. Yet over time, it came to be more than that, more than a contribution to operational efficiency and a healthy general balance sheet, as substantively important as that work was. This Purchasing & Stores Department, often under-appreciated and with all its eccentricities, had beguiled me into a love affair with the Santa Fe Railway. And as anyone from that era can attest, Santa Fe in turn had a love affair with America — it romanced our hearts and enchanted our collective imaginations.

A great deal has changed since 1957. Santa Fe's successor, BNSF Railway, operates with 19,328 more route-miles in 16 more states, plus 3 Canadian provinces. It employs 44,000 people, which is 13,491 fewer than on Santa Fe's payroll 61 years ago! What then was called Purchasing & Stores now is Strategic Sourcing & Supply. Digital technology has revolutionized the way material is procured and processed; requisitions, orders, and invoices are computerized, leaving, I'd wager, fewer summer jobs for young people.

It turned out I didn't join the Santa Fe as I'd originally planned. Yet I worked with gracious people who, even after I told them I wouldn't be pursuing a career in railroading, assured me that I had a summer job for as long as I needed one. Memories still linger with warm affection for this route of "holy faith," and for those enchanted summers so long ago.

— Robert L. Woodbury

NASA royalty aboard an Amtrak train

A 1972 *Florida Special* ride becomes memorable twice over

Over the years I have met a number of interesting people on passenger trains, but my most notable meeting occurred in April 1972 on Amtrak's *Florida Special*, a name held over from Seaboard Coast Line and predecessor Atlantic Coast Line. For my 18th birthday I asked my parents for train tickets from Miami to Baltimore and back, which at the time would be my longest train trip.

My northbound ride was uneventful. The highlight for me was sitting in the Sun Lounge of the 5-bedroom-lounge car *Sun Beam* for much of the daytime portion of my ride. The lounge boasted wrap-around windows onto part of the roof, a design as close to a dome as Northeast Corridor clearances allowed. (*Sun Beam*, renamed from *Palm Beach* by SCL, was one of three such cars Seaboard Air Line received in 1956 from Pullman-Standard for the *Silver Meteor*.)

At Baltimore my return trip began when I boarded *Metroliner* 107 at 2 p.m., arriving in Washington 32 minutes later.

Two years after the author's memorable ride on its Florida running mate, Amtrak's *Silver Star* departs Washington on March 13, 1974. Thomas L. Taylor

Washington Union Station was a magnificent example of Beaux Arts architecture — on the exterior — but by then it was rather dismal on the inside. It would fall into further disrepair before being fully restored into the magnificent terminal it

NextIssue

Super-Railroads!
After John W. Barriger modernized the weary Monon, his 1956 book *Super-Railroads* suggested a way forward for the industry

Diesel Diversity in May 1969
A New Yorker found plenty to see on his way to intercept the *Golden Spike Centennial Limited* in Illinois.

Santa Fe Surprises
Kansas, 1966: A derailment in Olathe results in rare action in Lawrence.

Upper Michigan Odyssey
Dave Ingles begins an epic tour of a fascinating, often overlooked area.

Alan Furler's Photos
The Center for Railroad Photography & Art presents a selection of work from a master lensman of the 1940s.

C&O/B&O Office Car Finale
End of an era for rail executive travel (planned for this issue, but bumped by our Overland Route coverage).

PLUS: True Color, Car Stop, What's in a Photo?, The Way It Was, Bumping Post, and more!

Classic Trains

SUMMER ISSUE
ON SALE
MAY 28, 2019

The Way It Was

is today. There was as yet no Amtrak first-class lounge there, but my 2-hour layover passed quickly as I roamed the platforms looking at parked passenger cars still painted and lettered with their pre-Amtrak identification: Penn Central, New Haven, Baltimore & Ohio, Illinois Central, Southern, Burlington, and Union Pacific.

The *Florida Special* departed Washington at 4:45 p.m.; as it happened, this would be the seasonal train's last run. Before long I went to the former SCL diner, which was amidst the train's five sleeping cars. Dinner started with celery, pickles, and a pear-and-cottage cheese salad, followed by leg of lamb, baked potato, green beans almondine, dinner rolls, ice cream, and iced tea . . . all for $4.37.

As we rolled through the darkness south of Petersburg, Va., I headed to the vestibule on the back of the rear car to watch the track recede behind us. I was just a high school senior, so I felt honored when a distinguished-looking gentleman with a German accent, who was also standing there, asked me to explain how the railroad traffic control system worked, as the red or green trackside lights had caught his interest. I did so, and after a while my new friend retired to his room, leaving just one other passenger and me in the vestibule. Soon he asked me, "Young man, do you know who you were talking to?" After I replied in the negative, he told me, "Dr. Wernher von Braun."

This was amazing to me, as the U.S. space program was one of my great interests and America was in the midst of the Apollo Moon program. Here I was on a train and had talked to the man who designed the mighty Saturn V rocket. As fate would have it, about 45 minutes later I went to the recreation car to watch the John Wayne movie *True Grit*, and who was seated next to me but Dr. von Braun. The following morning I was seated with him and his son in the dining car. During breakfast conversation I learned that they would be picked up by a NASA car at Winter Haven, Fla., to be driven to the Kennedy Space Center for the launch of Apollo 16 two days later.

Ultimately, my hobbies of train-riding and manned spaceflight would intersect a few more times, but those are stories for another day. Meantime, that encounter with "space royalty" on the last run of a famous passenger train holds a special spot among my memories.

— *Jack M. Turner*

Temporary crossover

Twin Cities Rapid Transit car 1656 clatters carefully over an unusual bit of trackage on Washington Street NE in Minneapolis on May 30, 1949. The 1911 product of TCRT's Snelling Shops (one of nearly 1,200 cars the transit company built at its two shops) is traversing a temporary crossover. When track, road, or utility construction forced the removal from service of one track, streetcar operators brought out portable crossovers that could be laid directly on the roadway. Tapered rails at the ends enabled the temporary tracks to mate with the permanent ones in the street. The car has apparently just come through the work zone. TCRT ended its rail operations five years later.

George Krambles, Krambles-Peterson Archive

Rail heritage from Iowa to California

Overland ROUTE 150

10 must-see museums along the first transcontinental railroad

BY JEFF TERRY

Golden Spike National Historic Site, Promontory, Utah. Jeff Terry

The first transcontinental railroad left an indelible mark on the western half of the United States, and today there are a number of railroad attractions located along the 1,683-mile route between Council Bluffs, Iowa, and Sacramento, Calif.

COUNCIL BLUFFS, IOWA

Designated as the eastern terminus of the Union Pacific by Abraham Lincoln, Council Bluffs is home to the **Union Pacific Railroad Museum**, located in a former Carnegie library building. The museum is the repository for UP's extensive corporate collection of railroad artifacts. A permanent exhibit, "Building America," focuses on UP's role in constructing the Overland Route and incorporates numerous photos and relics, including Arizona's gold-and-silver spike, one of three ceremonial spikes used at Promontory in 1869. Additionally, the museum displays furnishings and artwork from President Lincoln's private car, which was used to transport his body to Illinois in 1865. If you're looking for full-size rail equipment, the nearby **RailsWest Railroad Museum** displays UP 4-8-4 No. 813 along with other locomotives and cars. It's also a great place to watch trains pass on the UP and Iowa Interstate railroads.

OMAHA, NEBRASKA

Entering Omaha on I-80 West, visitors are greeted by two of the largest locomotives ever constructed, UP Big Boy 4023 and DDA40X diesel 6900. They're both exhibited outdoors at **Kenefick Park**, located on the grounds of Lauritzen Gardens. To reach the locomotives, visitors ascend a grand staircase and through a "canyon" of stone walls that includes signage, maps, and other information that tells of UP's role in shaping Nebraska's largest city. A few miles away is Omaha's 1929 Union Station building, now **The Durham Museum**, which is dedicated to preserving and displaying the history of the western United States. Its lower-level railroad exhibits include an Omaha streetcar, the 1924 observation car *Cornhusker Club*, and one of the oldest UP steam locomotives in existence, 1890-built 4-6-0 No. 1243.

NORTH PLATTE, NEBRASKA

First-time visitors will want to stop at

Union Pacific Railroad Museum, Council Bluffs, Iowa. Robert S. McGonigal

Kenefeck Park, Omaha, Nebr. Jeff Terry

The Durham Museum (Union Station), Omaha. Robert S. McGonigal

Golden Spike Tower, North Platte, Nebr. Jeff Terry


Cheyenne (Wyo.) Depot Museum. Robert S. McGonigal


Utah State Railroad Museum, Ogden. Jeff Terry

the **Golden Spike Tower and Visitor Center**, which overlooks UP's 2,850-acre Bailey Yard, the largest railroad classification yard in the world. Guests view the nonstop activity from the tower's covered 8th floor viewing room or outdoors on the 7th floor observation deck, both reached by elevator. Volunteers, many of them retired railroaders, keep the experience engaging by narrating the action and answering questions. Across town at **Cody Park Railroad Museum**, you can sit in the engineers' seat of UP Challenger No. 3977 and browse through an extensive collection of steam-era artifacts exhibited in a baggage car and a Railway Post Office car, and visit the restored depot from Hershey, Nebr.

CHEYENNE, WYOMING

The **Cheyenne Depot Museum**, housed in the city's 1887 Romanesque-style station, is dedicated to the people that built both the community and the railroad. Inside is an impressive collection of artifacts, photos, and interactive exhibits covering everything from locomotives to track tools. There is also an extensive model railroad depicting the Colorado narrow gauge. If you visit during Depot Days in May, you'll also be able to tour Cheyenne's historic roundhouse, which contains several locomotives. Nearby in Holiday Park sits UP Big Boy 4004, cosmetically restored in 2018.

OGDEN, UTAH

"You Can't Get Anywhere Without Coming to Ogden" was the motto of this community that served as the crossroads of the West — a hub for both UP and Central (later Southern) Pacific. Today Ogden's Union Station building is home to several institutions, including the **Utah State Railroad Museum**. Indoor exhibits range from a cutaway caboose to a preserved trestle section from the Lucin Cutoff. Mementos from the 1969 Golden Spike Centennial are exhibited, including a spike that was specially created for the 100th anniversary. Outdoors at the Spencer S. Eccles Rail Center, visitors can view and photograph a collection of 11 vintage locomotives including UP 4-8-4 833, gas turbine 26, and DDA40X 6916. SP is represented by GP9 3769 and the road's first SD45, No. 7457, delivered in 1966.

PROMONTORY, UTAH

Thirty-two miles west of Brigham City at windswept Promontory Summit is the **Golden Spike National Historic Site**, which exists today much as it did in 1869. Two full-size, operable replicas of the steam locomotives *Jupiter* and No. 119 are the primary attractions; they operate daily from May through September. Inside the visitors center you can learn about track building and view the original Ten Miles of Track, Laid in One Day sign. One of the best ways to see the park is by taking a self-guided auto tour of the abandoned CP and UP right of way.

SACRAMENTO, CALIFORNIA

Central Pacific had its start on the banks of the Sacramento River in 1862, and today the western terminus of the first transcontinental railroad is home to the **California State Railroad Museum**, located in Old Sacramento Historic District. The museum's Great Hall houses several relics from the 1860s, including the personal effects of Theodore Judah, an early promoter of a railroad to the Pacific, and the 1863 4-4-0 *Governor Stanford*, CP's first locomotive; the only surviving SP cab-forward is also there. An exhibit opening in 2019 shows how Chinese immigrants pushed the CP through the mountains using nothing more than hand tools. Also prominently displayed is

RAILROAD ATTRACTION DIRECTORY

To advertise in this section, call Mike Yuhas toll-free at 888-558-1544, Ext 625.

COLORADO — **Golden**

COLORADO RAILROAD MUSEUM
17155 W. 44th Avenue

Colorado RAILROAD Museum

There's something amazing about trains. The familiar whistle has always promised adventure. Experience it again with a visit to the Colorado Railroad Museum, one of the top 10 railroad museums in the United States with one of the largest collections of narrow-gauge equipment. The 15-acre rail yard also features a roundhouse restoration facility and renowned library. Train rides throughout the year. Group rates and programs available.

ColoradoRailroadMuseum.org **800-365-6263**

INDIANA — **Connersville**

WHITEWATER VALLEY RAILROAD
5th and Grand

Travel through time on Indiana's most scenic railroad. 33-mile round trip to Metamora, May through Oct. Special events Feb through Dec. Vintage diesels: 1951 Lima-Ham 750HP SW, 1954 EMD/Milw. SD10. Gift Shop.

www.whitewatervalleyrr.org **765-825-2054**

PENNSYLVANIA — **Marysville**

BRIDGEVIEW BED & BREAKFAST
810 S. Main St.

BRIDGEVIEW

Lately, train watching around The Bridgeview B&B has been extremely exciting with motive power from BNSF, UP, KCS, CP, CN, CSX and Ferromex often leading, plus add NS heritage units into the mix and you have some amazing lashup possibilities! Trains entering or exiting Enola Yard pass right by our front porch. From the spacious decks and sitting room, you can watch the Susquehanna River, Blue Mountains and train action on Rockville Bridge! Plus, visit Hershey, Gettysburg, and PA Dutch Country! Comfortable rooms all with private baths, A/C, Wifi, and a tasty breakfast are included with your stay. Take a virtual tour on our website and check us out on Facebook for daily updates, pictures and guest comments.

www.bridgeviewbnb.com **717-957-2438**

WISCONSIN — **Green Bay**

NATIONAL RAILROAD MUSEUM
2285 S. Broadway

All Aboard! Explore the UP Big Boy, Eisenhower's WWII command train, the exhibit Pullman Porters: From Service to Civil Rights, and our new exhibit entitled "The Jay W. Christopher Transportation China Collection: *Travel and the Era of Fine Dining by Air, Land, and Sea.*" View the Bauer Drumhead collection – 40 illuminated passenger train tail signs. Open year round.

www.nationalrrmuseum.org **920-437-7623**

Classics Today

the "Lost Spike," a second gold spike — missing until 2005 — that was created at the same time the original Golden Spike was manufactured in 1869, and Thomas Hill's famous painting *The Last Spike.* CSRM also is home to a large collection of rolling stock, some of which you can ride on the adjacent Sacramento Southern railroad. During 2019 the museum is hosting a number of special events to mark the 150th anniversary of the completion of the original transcontinental railroad.

STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION
(Required by 39 USC 3685)
1. Publication title: CLASSIC TRAINS
2. Publication No.: 019-502
3. Filing date: October 1, 2018
4. Issue frequency: Quarterly
5. Number of issues published annually: 4
6. Annual subscription price: $24.95
7. Complete mailing address of known office of publication: 21027 Crossroads Circle, Waukesha, WI 53186. Telephone: 262-798-6607.
8. Complete mailing address of general business office of publisher: same.
9. Publisher: Stephen C. George, 21027 Crossroads Circle, Waukesha, WI 53186. Editor: Robert S. McGonigal, same.
10. Owner: Kalmbach Publishing Co., 21027 Crossroads Circle, Waukesha, WI 53186; stockholders owning or holding 1 percent or more of total amount of stock are: Deborah H.D. Bercot, 22012 Indian Springs Trail, Amberson, PA 17210; Gerald & Patricia Boettcher Trust, 8041 Warren Ave., Wauwatosa, WI 53213; Alexander & Sally Darragh, 145 Prospect Ave., Waterloo, IA 50703; Melanie J. Kirrene Trust, 9705 Royston Ct., Granite Bay, CA 95746; Harold Edmonson, 6021 N. Marmora Ave., Chicago, IL 60646-3903; Laura & Gregory Felzer, 3328 S. Honey Creek Dr., Milwaukee, WI 53219; Susan E. Fisher Trust, 3430 E. Sunrise Dr., Ste. 200, Tucson, AZ 85718; Bruce H. Grunden, 255 Vista Del Lago Dr., Huffman, TX 77336-4683; Linda H. Hanson Trust, P.O. Box 19, Arcadia, MI 49613; George F. Hirschmann Trusts, P.O. Box 19, Arcadia, MI 49613; James & Carol Ingles, 1907 Sunnyside Dr., Waukesha, WI 53186; Charles & Lois Kalmbach, 7435 N. Braeburn Ln., Glendale, WI 53209; Kalmbach Profit Sharing/401K Savings Plan & Trust, P.O. Box 1612, Waukesha, WI 53187-1612; James & Elizabeth King, 2505 E. Bradford Ave., No. 1305, Milwaukee, WI 53211-4263; Mahnke Family Trust, 4756 Marlborough Way, Carmichael, CA 95608; Milwaukee Art Museum, Inc., 700 N. Art Museum Dr., Milwaukee, WI 53202; Thomas & Kathleen Murphy, 3469 Meadow Sound Dr., De Pere, WI 54114; Lois E. Stuart Trust, 1320 Pantops Cottage Ct., No. 1, Charlottesville, VA 22911-4663; David M. Thornburgh Trust, 8855 Collins Ave., Apt. 3A, Surfside, FL 33154-0436.
11. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities: N/A
12. Tax status (for completion by nonprofit organizations authorized to mail at special rates): Has not changed during the preceding 12 months.
13. Publication title: CLASSIC TRAINS
14. Issue date for circulation data below: September 2018
15. Extent and nature of circulation:

	Average No. copies each issue during preceding 12 months	No. copies of single issue published nearest to filing date
a. Total number of copies (net press run)	81,417	80,876
b. Paid circulation (by mail and outside the mail)		
1. Mailed outside-county paid subscriptions	38,600	37,839
2. Mailed in-country paid subscriptions	0	0
3. Sales through dealers and carriers, street vendors, and counter sales	12,734	12,366
4. Paid distribution by other classes of mail through the USPS	0	0
c. Total paid distribution (sum of 15b1, 15b2, 15b3, and 15b4)	52,430	51,306
d. Free or nominal rate distribution		
3. By mail	285	288
4. Outside the mail	0	0
e. Total free or nominal rate distribution	285	288
f. Total distribution (sum of 15c and 15e)	51,620	50,493
g. Copies not distributed	29,797	30,383
h. Total (sum of 15f and 15g)	81,417	80,876
i. Percent paid (15c divided by 15f times 100):	99.45%	99.43%
16. Electronic copy circulation:		
a. Paid electronic copies	1,323	1,102
b. Total paid print copies and paid electronic copies (sum of 15c and 16a)	52,675	51,307
c. Total print distribution and paid electronic copies (sum of line 15f and 16a)	52,942	51,595
d. Percent paid (both print and electronic copies) (16b divided by 16c times 100)	99.46%	99.44%

17. Publication of statement of ownership: Publication required. Printed in the Spring 2019 issue of this publication.
18. I certify that the statements made by me above are correct and complete.
Nicole McGuire, Vice President, Consumer Marketing. Date: September 28, 2018

Ad Index

Big Boy Flashcards 97
C&NW Historical Society 10
California State Railroad Museum 108
Catenary Video Productions 100
Classic Trains Books 100
Colorado Railroad Museum 10
Durbin & Greenbrier Valley Railroad 11
Four Ways West 15
Greg Scholl Video Productions 9
Montana Historical Society. 15
Monte Vista Publishing. 15
Nevada Northern Railway Museum. 106-107
Northern Pacific Railway Historical Association. 97
Pennsylvania Railroad Technical and Historical Society. 96
railroadbooks.biz 100
Railroads at War. 99
Railway & Locomotive Historical Society 10
Ron's Books 9
Semaphore Records. 98
Shore Line Interurban Historical Society. 7
Steamship Historical Society of America 9
Trains Books 96
TrainsShipsPlanes 98
Transcontinental Anniversary Items 2
Union Pacific Historical Society 11
Whitewater Valley Railroad. 99
Wilson, Ian 99

The Advertiser Index is provided as a service to *Classic Trains* magazine readers. The magazine is not responsible for omissions or for typographical errors in names or page numbers.

Burnham's box in New Orleans

The Southern Railway System's terminal in New Orleans was the work of Daniel Burnham, designer of Washington Union Station, the World's Columbian Exposition in Chicago, New York's Flatiron Building, and other landmarks. Tailored to a narrow site at the intersection of Basin and Canal streets, the Southern station's head building, opened in 1908, measured 80 feet by 235 feet. The boxy front portion, 80 feet wide by 40 feet deep by 50 feet high, was designated as the main waiting room, but was more of a grand vestibule; behind it, a long, narrow "waiting room lobby" led back to a concourse and the station's two platforms, which served four tracks. Flanking the lobby were the ticket office; baggage room; restaurant; and men's, women's, and "colored" waiting rooms, with offices on the second floor. The Southern depot, which also hosted Gulf, Mobile & Ohio trains, was razed in 1956, two years after New Orleans' five stations were consolidated into a new Union Passenger Terminal.

Southern Railway


BE THE ENGINEER!
MAKE TRACKS TO ELY FOR THE 150TH ANNIVERSARY!
NEVADA NORTHERN RAILWAY MUSEUM
ELY, NEVADA • (775) 289-2085 • WWW.NNRY.COM
NEVADA
A WORLD WITHIN. A STATE APART.
AS SEEN ON TV

NEVADA NORTHERN RAILWAY

HANDS ON HISTORY

SEE IT • FEEL IT • RUN IT!

"You spend the night in the Caboose! But it has no bathroom, or you can spend the night in the Bunkhouse but it's not a caboose!"

– Dr. Sheldon Lee Cooper

NIGHT AT THE MUSEUM!

RAILROAD REALITY WEEK!

TRANSCONTINENTAL RAILROAD 1869 - 2019 150 YEARS THE TWO SPIKES SILVER & COPPER